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Centre for Translation Studies

A Diachronic Study of Subtitling for the Deaf and the Hard-of-Hearing In Poland

Renata Mliczak

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Supervisors:

Prof. Jorge Díaz-Cintas

Dr Agnieszka Szarkowska

Declaration of originality

I, Renata Mliczak, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

25 September 2018

Abstract

This research project provides a thorough and detailed picture of the developments that have taken, and are taking, place in Poland in terms of Subtitling for the Deaf and the Hard-of-Hearing (SDH), with a special focus on SDH for television but including other media like DVD, theatre, cinema and the internet. Aspects such as the medical, cultural and linguistic nature of deafness, the history of SDH and its principal characteristics are explored in detail, followed by a diachronic study of SDH on Polish television.

The theoretical framework of the study draws mainly on descriptive translation studies and is based on concepts such as norms and patronage. The investigation elucidates SDH norms frequent in Poland from the inception of the service by public service television in 1994 and up until 2010. It later focuses on the analysis of some key SDH features and their evolution in the period from 2011 until 2017. 2011 was a symbolic year in media history, when the obligation to provide a minimum of 10% of accessible programming on Polish television became legally binding. The characteristics of SDH, which are explored in detail, include subtitle speed and editing, as well as extra- and paralinguistic elements.

The explanations and examples presented in the thesis are backed up by semi-structured interviews with subtitlers as well as by the analysis of numerous subtitling files generously provided by the Polish public service television and by subtitlers working for private stations and non-governmental organisations. The study aims to chart the historical development of SDH in Poland, whilst unravelling the SDH norms that were in operation in the two specified periods – 1994-2010 and 2011-2017 – and led to the current standards.

Impact Statement

The exploration conducted in this thesis on the knowledge and practice of SDH in Poland has had a significant impact both on the broader field of Audiovisual Translation (AVT) studies and other interrelated disciplines, such as deaf studies, deaf education and psycholinguistics. The examination of existing Translation Studies methodologies and their application to the diachronic study of SDH norms constitutes an important contribution to research on accessibility services. As the first ever diachronic study on SDH in Poland, this thesis offers an analysis into the way in which translation norms have evolved in the provision of this access service. Apart from its impact on AVT, and specifically on accessibility services, the current research may serve as a point of reference for regulatory bodies overseeing the development of SDH in Poland, as well as for trainers and trainees who wish to expand their knowledge and discover the reasons behind the strategies currently adopted in SDH. The research has been disseminated in the form of presentation papers at various international conferences, and three articles have been published in peer-reviewed volumes, with the potential for further publications.

Acknowledgements

First of all, I would like to thank my primary supervisor, Prof. Jorge Díaz-Cintas, for leading me into this journey of researching AVT. Starting with my interview for a place in a Master's degree in Audiovisual Translation at Roehampton University and later throughout my doctoral studies, Prof. Díaz-Cintas has inspired me to follow a career in AVT. It is his attitude towards the students, his passion for work and his vision to build an amazing community of like-minded people that has helped me so much in pursuing my dream of writing a PhD dissertation. Without his encouragement, continuous assistance and always very constructive and detailed comments and corrections I do not think I would have been able to complete it.

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Further thanks go to all the subtitlers who agreed to devote their precious time to talk about their work and use the results of the interviews in this dissertation. Their contribution has been of paramount importance in the study on SDH in Poland. I would also like to thank all the professionals who have sent me their subtitle files. They included individual subtitlers, the NGO organisation Katarynka, as well as the Polish public service television TVP.

Thank you to all my friends and family, who have always believed in me and have given me so much support over the years that it has taken me to complete my thesis.

Finally, I would like to send my special thanks to Norbert, who has always been there for me, through ups and downs, and without whose technical expertise and calm approach I would have not been able to get to the end.

Table of Contents

List of tables

List of figures

List of examples

List of abbreviations

AD	Audio Description
ANOVA	Analysis of Variance
AVT	Audiovisual Translation
BBC	The British Broadcasting Corporation
BITRA	Bibliography of Interpreting and Translation
BSL	British Sign Language
CFD	Captioned Films for the Deaf
CI	Confidence Interval
CMP	The Captioned Media Program
CODA	Child(ren) of Deaf Adult(s)
CPS	Characters per second
DCAL	Deafness, Cognition and Language Research Centre
DCMP	The Described and Captioned Media Program
DHOH	Deaf and Hard-of-hearing
DTS	Descriptive Translation Studies
DTV4All	Digital Television For All
EBU	European Broadcasting Union
ECR	Extralinguistic Cultural Reference
EFHOH	European Federation of Hard-of-hearing People
EPG	Electronic Program Guide
EU	European Union
FCC	Federal Communications Commission
HBB4All	Hybrid Broadcast Broadband for All
IT	Information Technology
ITC	Independent Television Commission

KRRiT	Krajowa Rada Radiofonii i Telewizji [The National Broadcasting Council]
NBS	National Bureau of Standards
NCAM	National Center for Accessible Media
NCI	National Captioning Institute
NGO	Non-governmental Organisation
NPR	National Public Radio
NVRA	The National Verbatim Reporters Association
ODPS	On-demand Programme Services
Ofcom	The Office of Communications
PJM	Polski Język Migowy [Polish Sign Language]
PGSS	Paget-Gorman Sign System
PSL	Polish Sign Language
PSP	Pidgin Sign Polish
PSS	Polish Signed System
PZG	Polski Związek Głuchych [Polish Association of the Deaf]
SD	Standard Deviation
SDH	Subtitling for Deaf and Hard-of-hearing
SE	Signed English
Sig.	Significance
SJM	System Językowo-Migowy [Polish Signed System]
SLI	Sign Language Interpreting
SP	Signed Polish
SPSS	Statistical Package for the Social Sciences
SR	Speech Recognition
SSE	Sign Supported English
SSL	Spanish Sign Language
ST	Source Text
TS	Translation Studies

TT	Target Text
TV	Television
TVP	Telewizja Polska [Polish public service television]
UK	United Kingdom
USA	United States of America
WGBH	Western Great Blue Hill
WOŚP	Wielka Orkiestra Świątecznej Pomocy [Great Orchestra of Christmas Charity]
WPM	Words per minute
VOD	Video-on-demand

1 INTRODUCTION

1.1 Rationale and motivation for the study

The beginnings of subtitling for the deaf and the hard-of-hearing (SDH) in Poland go back to 1994, when the first film, *Rio Grande* (John Ford, 1950), was subtitled by a team of Polish public service television subtitlers for broadcasting via Teletext on Telewizja Polska (TVP) [Polish public service television] (Künstler 2008). Since then, there have been numerous developments in the field of the accessibility services provided for audiences with sensory impairments, and quality benchmarks used for SDH have evolved based on ongoing feedback volunteered by viewers and non-governmental associations. The range of audiovisual programmes offered with subtitles has also been broadened, and the number of programme hours provided with this support extended. However, despite this flurry of professional activity, there is still some room for improvement in terms of both the quantity and quality of SDH produced in Poland. In addition, this development has not found its reflection in research. Despite a growing number of studies focusing on SDH in Poland, we still do not know much about what the early subtitles looked like, what norms were followed, and how they have changed over the years.

This study aims to address this research gap by analysing subtitles created at the outset of SDH in Poland and those produced in more recent times. The corpus also includes selected subtitled films in order to analyse the correspondence between the dialogues as well as sounds in the films and the text of subtitles when discussing editing and the presence of extra- and paralinguistic elements in SDH. The research also takes into account the views of professional subtitlers on their work, thus embracing two types of research methodology – descriptive translation studies and interviews – in order to corroborate the results of the analysis.

My motivation behind writing this dissertation arises from my personal interest in the status of media accessibility services in Poland and the perceived inherent inadequacy as regards the right of people with sensory impairments to full access to audiovisual materials so that they can enjoy them like other Polish

citizens. Having lived in the UK for a long time, it was the comparison between the access services offered in Poland with those provided in the UK as well as the many conversations that I have had with people who are affected by the state of accessibility in my native country that inspired me to embark on this research. In my professional life, I have always worked with disadvantaged children as a special needs teacher. I have also cooperated with the Instytut Głuchoniemych [the Institute for the Deaf] in Warsaw, creating adapted subtitles for deaf students. My academic interests are therefore rooted in my professional teaching and subtitling experience.

1.2 Objectives and research questions

One of the main objectives in this research is to provide a thorough and detailed picture of the developments that have taken, and are taking, place in Poland with regard to the provision of subtitling for the deaf and the hard-of-hearing. Tracing the evolution of SDH in the country will offer a point of reference for academia, professionals, associations and government bodies alike. In order to ensure progress in research, as well as in the actual improvement of accessible services, a historical background is offered as a foundation on which further developments can take place. It is also my hope that this thesis will be of interest to the viewers themselves, and that they will refer to it in order to obtain detailed information in order to better understand the evolution and process of preparing SDH and, therefore, make informed comments about audiovisual materials supported with SDH. However ambitious my plan might seem, I do hope that it will be a valuable contribution to the field and a stepping stone in the improvement of accessibility to audiovisual media in Poland.

The major research question addressed in this thesis is:

1. How has Polish SDH evolved since the introduction of the service in the country until the present time?

A number of supporting questions, which help to contextualise the research, concern the various issues addressed in each of the chapters:

1. What are the needs and expectations of SDH consumers in terms of their access to audiovisual media in Poland (Chapter 3)?
2. What historical events have influenced the provision of SDH in the country and how (Chapter 4)?
3. How have the SDH norms related to reading speed, editing and extra- and paralinguistic elements changed over the two analysed periods (1994-2010 and 2011-2017) (Chapter 6)?
4. How does professional subtitlers' feedback on their work relate to the SDH norms observed in the analysis of actual subtitles (Chapter 6)?

These fundamental issues have been addressed within the methodology based on Descriptive Translation Studies (DTS), and, more specifically, the concept of norms and patronage as well as by referring to the semi-structured interview as the method most suitable for the exploration of subtitlers' feedback on their profession (Chapter 2). The analysis of the existing research (Chapter 5) prepares the ground for the study in Chapter 6. The following section offers more details on each of the chapters, which together constitute the platform for tracing the developments of SDH norms in Poland.

1.3 Thesis structure

The thesis consists of seven chapters that structure the discussion of SDH in Poland, with a particular focus on the evolution of SDH norms since the introduction of the service in the 1990s until the present.

A recurrent feature throughout the thesis is the fact that, where appropriate, the chapters start by discussing SDH-related issues from a rather general point of view, foregrounding, where necessary, references to countries that are leaders in media accessibility, such as the UK or the USA. After this introductory exploration, the Polish SDH mediascape is analysed in greater detail.

Chapter 1, **INTRODUCTION**, elaborates on my reasons for conducting the study and presents the project's principal aims and research questions, followed

by an overview of the structure of the thesis, in which all the sections are briefly discussed.

Chapter 2, **THEORETICAL FRAMEWORK AND METHODOLOGY**, provides an in-depth account of the theoretical framework and methodology used in the thesis. It explains some of the most relevant concepts borrowed from Translation Studies (TS), such as norms and patronage, in order to apply them to the analysis of SDH in Poland. The methodology behind the use of semi-structured interviews is also analysed.

Chapter 3, **ACCESSIBILITY SERVICES**, focuses on the wider field of accessibility services for people with sensory impairments and, more concretely, on the place occupied by subtitling for the deaf and the hard-of-hearing amongst them. In this section, I explore the various assistive services that help people with sensory impairments access audiovisual materials and examine SDH as one of the main options for people with hearing loss. This chapter also explores the nature of deafness from a medical, cultural and linguistic point of view, thus contributing to a better understanding of the target audience's needs and expectations. Next, it analyses the provision of Polish SDH on different media platforms, with its primary objective being to investigate the quantity and quality of the pre-prepared services encountered on television, commercial DVDs, the internet, theatres and cinemas, as well as during the performance of live events.

Chapter 4, **HISTORY OF SDH AND LEGAL REGULATIONS**, investigates the historical milestones that have marked the provision of SDH in several countries around the world and discusses the legislation and various legal documents that have been passed in some nations in an attempt to regulate SDH provision. It starts with an exploration of international regulations influencing the provision of SDH across the world. It is followed by an overview of the first countries to introduce the service and establish themselves as pioneers, and later as leaders, in the provision of SDH, namely the USA and the UK. Against this background, the history of Polish SDH, as well as the national legislation that

regulates this field, are analysed and the major turning points and their significance examined in detail.

In Chapter 5, **THE NATURE OF SDH**, the main SDH characteristics are presented. A selection of the most significant parameters is discussed in the light of international research as well as various studies conducted in Poland. The same parameters are further explored in the following chapters with a diachronic focus on two different historical periods.

Chapter 6, **EMPIRICAL STUDY**, concentrates on elucidating the main SDH characteristics that were common at the inception of the service in Poland in the 1990s and tracks its evolution until the year 2011, a symbolic moment in history when the obligation to provide a minimum of 10% of accessible programming on Polish television became legally binding. The chapter later focuses on the exploration of how the same SDH features have been dealt with since 2011 up until 2017, when I conducted the final analysis on a selection of professional SDH files produced over the last few years. The research approach taken in this study is both quantitative and qualitative. The quantitative approach is applied when calculating the instances of editing as well as extra- and paralinguistic elements in films with SDH. It also involves analysing subtitle speed in files. Here, statistics inform the evolution of norms relating to subtitle display rates from the early stages of SDH in Poland, before any legislation on SDH was passed, and after 2011, when the provision of SDH on television became law. The qualitative aspect is evident in descriptions of examples of identified SDH norms from the analysed films.

This chapter offers a diachronic study of SDH on Telewizja Polska (TVP), the Polish public service television and the platform with the longest history in the country when it comes to the production and provision of this service. For reasons of comparison, other television stations as well as DVD and NGO subtitles are also taken into account in the analysis for the 2011-2017 period. The corpus, as well as the criteria for the analysis and discussion of the findings, is expected to contribute to a deeper understanding of the way in which SDH norms have evolved in Poland. The explanations and examples are

all backed up by the analysis of numerous subtitling files which have generously been provided by the Polish public service television as well as by subtitlers working for private stations and non-governmental organisations and semi-structured interviews with subtitlers. The study aims to chart the historical development of SDH in Poland whilst unravelling the SDH norms that have been developing over the years and constitute the basis of the current standards.

Chapter 7, **FINAL CONCLUSIONS**, summarises the main outcomes of this research and identifies new issues and topics for the further analysis of Polish SDH.

Finally, there is BIBLIOGRAPHY followed by six APPENDICES: (1) interview questions and answers provided by 10 professional subtitlers; (1a) a translation of the interview questions into English; (2) information on all the films from the corpus, including the title, director, year of production, genre, year of subtitling and the audiovisual platform it was subtitled for; (3) information on the average subtitle speed, the average duration and the mean number of characters for each film, (4) the instances of editing strategies in available films from the pre-2011 and 2011+ periods, (5) the instances of extra- and paralinguistic elements in available films from the pre-2011 and 2011+ periods, and (6) subtitles with more than two lines in the whole corpus.

2 THEORETICAL FRAMEWORK AND METHODOLOGY

It is Translation Studies (TS) that have furnished the theoretical approach adopted for this research. The point of departure is Audiovisual Translation (AVT) Studies and its relationship with Descriptive Translation Studies (DTS). The applicability of DTS in AVT is well explained by Díaz-Cintas (2004) in his article "In search of theoretical framework for the study of audiovisual translation". Here, translation norms, one of key concepts in DTS, "understood as a central element in the translation process and [accounting] for the relationships that exist between the rules of the abstract and modelling society and the idiosyncrasies of each translator" (Díaz-Cintas 2004: 25), are of particular significance for the study of the evolution of SDH norms. Patronage, a DTS concept that refers to different powers (people or institutions) influencing the end product, is also considered in this thesis. Authorities such as the European Union or Polish government, as well as different deaf organisations, broadcasters, distributors, etc., have all played a role in shaping the final output of SDH on Polish television.

Researching the evolution of norms in Polish SDH is carried out from two distinct angles: interviews with SDH professionals, where I discover what they know about SDH norms, and the manual analysis of a number of subtitle files, whereby the actual subtitle texts are explored and concluding with what these norms actually are and the extent to which they correspond, or not, to what the subtitlers state.

2.1 Translation Studies and Audiovisual Translation

In its beginnings in the 1950s and the 1960s Audiovisual Translation was given a relatively peripheral treatment, which to some extent resulted from the way in which academics had defined translation itself throughout the years. One of the early scholars to widen this discipline, Jakobson (1959/2000), distinguished three types of translation: (1) intralingual (rewording), (2) interlingual (translation

proper) and (3) intersemiotic translation (transmutation). The nomenclature used by the author shows how the translation of verbal texts from one language into another – what he defines as translation proper – was prioritised (Remael 2004), pushing the study of AVT to the margins of translation somewhat, as language is only one of its many components and is always constrained by the technical limitations that characterise AVT.

Indeed, some academics have highlighted the fact that, for a long time, AVT was treated as the Cinderella of academic research in translation (Díaz-Cintas 1998). Amongst other reasons, this state of affairs was influenced by the numerous practical obstacles encountered when embarking on research into AVT. For instance, it was difficult to obtain the primary materials on which to conduct the studies, such as dialogue lists, subtitle files with the commercial spotting or dubbing scripts, due primarily to the reluctance on the part of the subtitling studios, the film distributors and the translators themselves to share these materials (Díaz-Cintas 2004b). Moreover, as Díaz-Cintas (*ibid*.) claims, the publication of this type of research can be challenging as it is not always possible to add audiovisual materials to an article or a book, due to copyright regulations or the high expense incurred when publishing pictures or when adding videos to a book.

There are also challenges related to the methodological approaches that can be applied to the analysis of AVT. Many translation theories are not applicable or fully operational in this specific field and require a considerable amount of elaboration to come up with a framework able to account for the new communicative dimensions that characterised AVT (*ibid.*). Although these challenges may have hindered the development of research on AVT, it is not to say that they have not been overcome. On the contrary, after a slow start in the 1950s and 1960s (Díaz-Cintas and Remael 2007), and a dormant period in the 1970s and 1980s, research on AVT enjoyed a considerable surge in scholarly activity in the 1990s thanks primarily to the advent of digital technology. Since then, the discipline has been gaining in popularity, and a large number of academic publications have seen the light. A simple search on Bitra, an international online bibliography for interpreting and translation, shows that to

date there have been over 3,000 articles, books, chapters, dissertations, etc., published there on the topic of audiovisual translation, and over 1,300 on subtitling.

One of the first significant contributions to the advancement of translation theories embracing AVT was Delabastita's (1989) article on the communicative value of filmic signs and channels. The model is made of four distinct categories: (1) visual channel – verbal signs, (2) visual channel – nonverbal signs, (3) acoustic channel – verbal signs, (4) acoustic channel – nonverbal signs. Moreover, stating that "film establishes a multi-channel and multi-code type of communication" (*ibid.*: 196), he draws attention to the fact that it is the confluence of all these signifying channels that helps viewers access the film and make sense of the message intended by the author of the audiovisual production. The various codes described by Delabastita (*ibid.*) are as follows:

- verbal codes (linguistic and paralinguistic)
- literary and theatrical codes (plot, dialogue exchanges, etc.)
- proxemics and kinesics, costume, make-up, politeness, etc. codes (nonverbal features of characters' behaviours)
- cinematic code (techniques and genres of the cinema)

Delabastita draws the attention of academics willing to explore AVT to the need to embrace the complexity of mass communication, specifically in the case of films and TV. Yet, another issue raised by Delabastita (*ibid.*) is whether the name used to refer to the practice of transferring audiovisual materials across languages and cultures should still be 'translation' or whether it should be 'adaptation'. This discussion had already been initiated by the views on AVT held by some previous scholars, who considered it to be a form of constrained translation, due to time and space limitations, originally presented by Titford (1982) and later popularised by Mayoral *et al*. (1988).

The challenges of properly coining this newly emerging discipline have been discussed in publications by Luyken *et al.* (1991), who write about audiovisual language transfer, or Gambier (2003), who in an attempt to open up the field,

talks about audiovisual translation, screen translation, multimedia translation and transadaptation, to mention just a few. However, as Díaz-Cintas and Remael (2007: 12) claim, "audiovisual translation", abbreviated as AVT, is the term most commonly used by scholars nowadays and should therefore be "the standard referent" when referring to this branch of TS.

In addition to challenges involving the name for this specific area of study, there have also been some problematic issues related to the research methodologies that should be applied to the study of AVT, and which have led some scholars to refer to "the lack of systematic theorization" in AVT (Luyken *et al.* 1991, in Pérez-González 2011: 19). And yet, as Remael (2004: 16) puts it, "some scholars deplore the lack of an encompassing theory of AVT, yet one cannot help wondering if such a theory would even be useful". She continues to explain that it is indeed the interdisciplinary nature of AVT that allows researchers to use methodological concepts borrowed from various allied disciplines including linguistics, literary studies, film studies, reception studies, didactics, etc. Nevertheless, many of the major initial works on AVT have been conducted within the framework of Descriptive Translation Studies (DTS), the Polysystem Theory,[1] and the Functionalist Translation Studies paradigm (*ibid.*).

As the current research draws mostly on the premises put forward by DTS, the remaining sections of this chapter are devoted to the further elucidation of this theoretical framework.

2.2 Descriptive Translation Studies

As Pérez-González (2011) states, a large number of AVT researchers have used Descriptive Translation Studies (DTS) as their main methodological approach. Indeed, in his article "In search of a theoretical framework for the study of audiovisual translation", Díaz-Cintas (2004) argues that DTS is a most suitable framework for researching AVT due to the functionality of such

[1] For Díaz-Cintas (2004), the Polysystem Theory comes under the umbrella term of Descriptive Translation Studies.

concepts as norms, patronage, etc. within the field of AVT. DTS clearly departs from previous translation approaches that were excessively prescriptive and dogmatic in their postulates. The new paradigm focuses on describing translation as it actually is, and not as it should be, thus avoiding value judgements on whether some solutions are better than others. After a brief overview of the beginnings and categorisation of DTS, the focus in these pages centres on two of the main concepts behind the current research, namely, norms and patronage.

Following Holmes's proposal (1972), Translation Studies (TS) have been divided into two main branches: pure and applied, as illustrated in Figure 1 below:

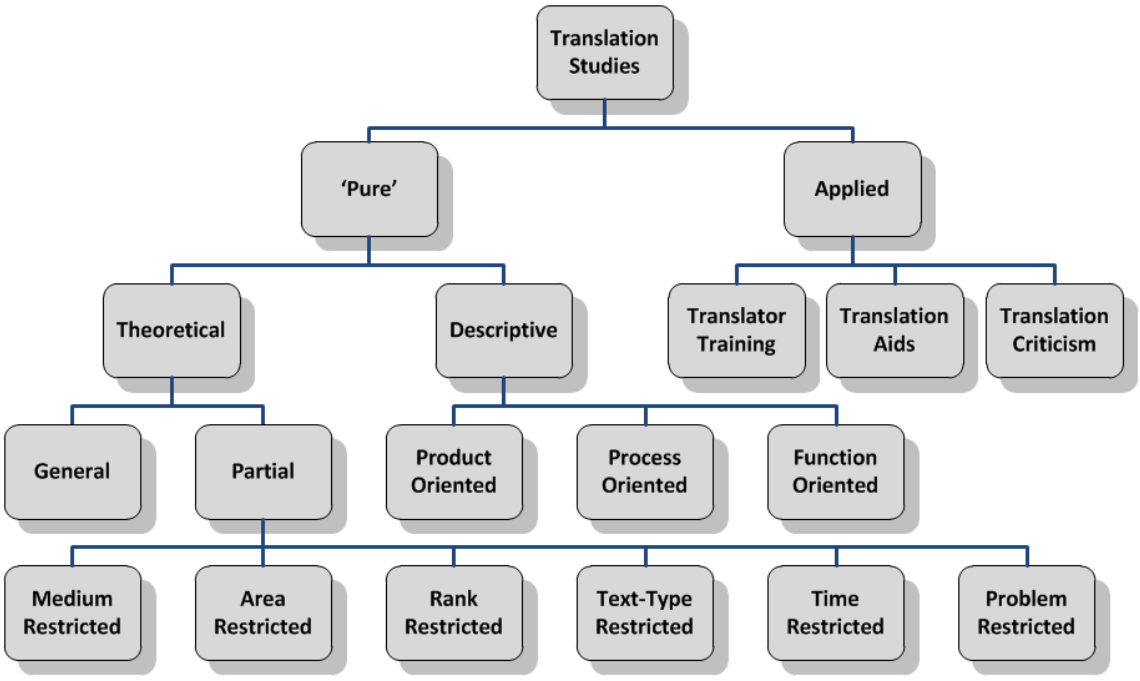


Figure 1: Holmes's map of Translation Studies (Toury 1995: 10)

The applied branch, which focuses on translator training, translation aids and translation criticism can be seen as the more prescriptive, whereas the pure branch adopts a more descriptive and theoretical angle. In Holmes's words, it aims "(1) to describe the phenomena of translating and translation(s) as they manifest themselves in the world of our experience, and (2) to establish general principles by means of which these phenomena can be explaining to and

predicted" (*ibid.*: 71). The descriptive dimension of the pure branch can be said to constitute what is known as DTS.

DTS can be classified into product-, function- or process-oriented approaches. Product-oriented DTS focus on the analysis of existing translations, and can adopt an approach that focuses on a specific historical period, a particular language combination or a given text type. Product-oriented approximations may be synchronic or diachronic in nature. Function-oriented DTS, on the other hand, deal with the function fulfilled by a translation in a particular sociocultural situation and pay special attention to the context in which a translation has been produced, distributed and/or received. Finally, the process-oriented DTS branch concerns itself with the psychological dimension of translation and takes as its main object of study the exploration of the cognitive efforts that take place in the professional's mind during translation practice.

Holmes's map was revised and updated by Munday (2012: 19), especially as regards the applied nature of translation studies, as displayed in Figure 2:

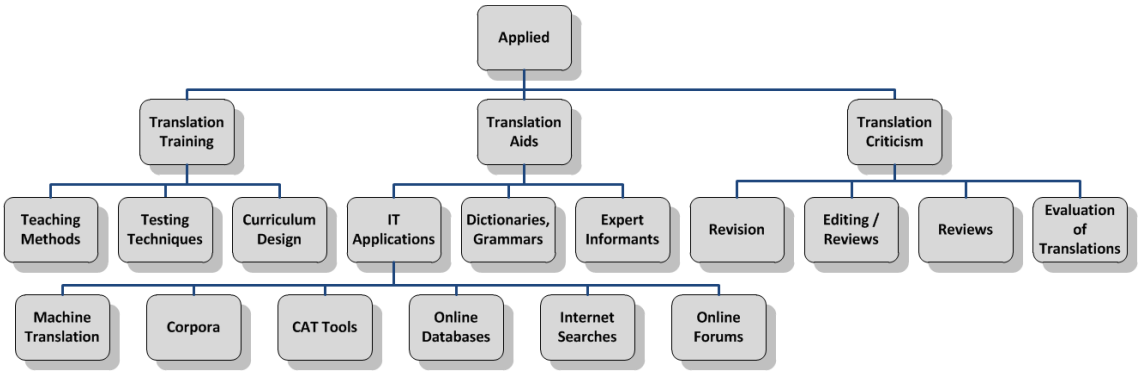


Figure 2: The applied branch of Translation Studies (Munday 2012: 19)

The author has added subcategories in translation training and translation criticism and greatly expanded on translation aids, including more recent developments in ICT applications. Reception on the part of the audience, which was lacking in the old psychological approach, has been considered in the new one.

The current research project falls under the product-oriented DTS category, as it examines existing translations from a synchronic and diachronic perspective. The synchronic angle applies when the research focuses on mapping out the subtitling norms that can be detected in the actual subtitles of films broadcast during a specific period of time (see Chapter 6), whereas the diachronic approach is taken to discuss the evolution of norms over a certain period of time. However, this research may be said to have a more ambitious goal, as it also delves into some of the issues that are intimately related to the part that the subtitled programmes have played in the target culture, that is to say, among deaf and hard-of-hearing viewers. From this perspective, it can be said to belong to function-oriented DTS.

In terms of the division of TS, the current project relates to the highlighted sections in Figure 3:

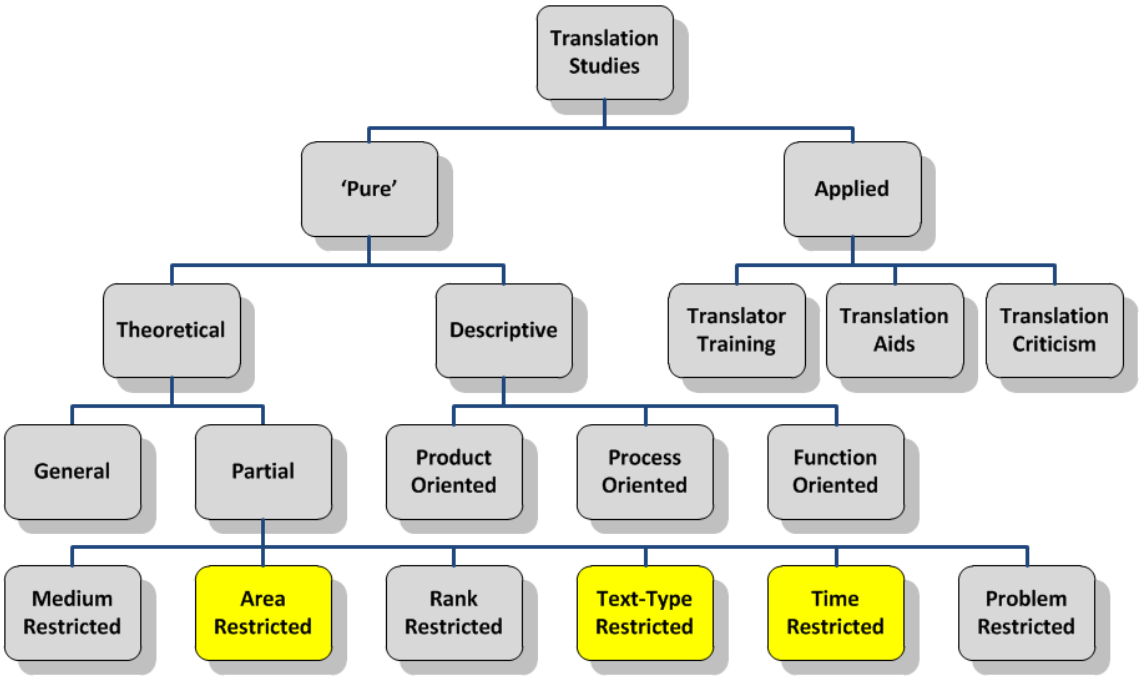


Figure 3: The current research within Holmes's map of Translation Studies

The study conducted as part of this research is area restricted in the sense that it involves current languages and cultures (Munday 2012). It is also text-type restricted as it analyses a specific genre – i.e. films –, within a given type of translation, namely audiovisual translation. Lastly, it is categorised under time-

restricted theories due to the fact that it refers to translations within a specific time frame (*ibid.*).

The fact that the present research can be ascribed to more than one category highlights the fact that several restrictions may apply at any given time, as explained by Munday (2012). Díaz-Cintas (2004: 31) argues that AVT goes beyond the linguistic transfer of information and claims that:

> by transcending the purely linguistic dimension, the postulates put forward by DTS have the advantage of placing translation researchers on a starting grid that allows them to channel their efforts into the object of study from a plural and interdisciplinary perspective.

The studies by Karamitroglou (2000), Díaz-Cintas (2004), Neves (2005) and Pedersen (2011) are only a few examples proving that descriptive translation studies offer a good starting point for a theoretical discussion and an optimal methodology with which to conduct fruitful research into the AVT field.

The main aims of DTS are to "describe, explain and predict translational phenomena" (Brownlie 2011: 77), which also inform this thesis, particularly where I focus on the history of SDH in general as well as in Poland. I investigate how norms have changed over the years and discuss the current situation, taking into account variables such as the expectations of the viewers, the training and experience of the subtitlers, as well as the financial and ideological issues that influence subtitling practice in the country. With a clear picture of the past and a solid understanding of the features that have marked its evolution, it is easier to predict the direction in which SDH might evolve in the coming years. The emphasis placed by DTS on the historical and diachronic evolution of translation is also mirrored in this thesis in order to explain the main features and evolution of Polish SDH. The concept of norms, a quintessential part of the DTS paradigm, is indeed the main heuristic tool for my study (see Sections 2.2.1 and 2.2.2). Unravelling the norms and the behavioural translation patterns followed by professionals since the inception of SDH in Poland and then observing how they have been changing under different socio-cultural circumstances constitute some of its main objectives.

Finally, the concept of patronage, originally articulated in Translation Studies by Lefevere (1985), is also extensively used in my research (see Section 2.2.3), especially when analysing the role played by the various stakeholders, the impact of the policies that regulate the provision of SDH and the relationships that are established between the broadcasters, the professional subtitlers and the representatives of the sensory impaired audience.

The following sections discuss the various theoretical concepts noted above in detail, before applying them to the main framework used in this research for the study of SDH.

2.2.1 Translation norms

The concept of norms is particularly important within the paradigm of DTS. As noted by Toury (1995: 53), norms direct "translation activity in socio-culturally relevant settings". Adhering to a sociological and social psychological interpretation, he sees them as:

> the translation of general values or ideas shared by a community – as to what is right and wrong, adequate and inadequate – into performance instructions appropriate for and applicable to particular situations, specifying what is prescribed and forbidden as well as what is tolerated and permitted in a certain behavioural dimension. (*ibid.*: 55)

Toury (*ibid.*) identifies three types of norm depending on the various stages of the translation process: (1) initial norm, (2) preliminary norms, and (3) operational norms. The initial norm determines whether the translator follows the norms of the source text (ST), and consequently adheres to the source language culture, or, on the contrary, privileges those of the target text (TT). As schematically shown in Figure 4 below, the stronger the adherence to the ST norms, the more adequate the TT, and the bigger the reliance on TT norms, the more acceptable the translation can be said to be:

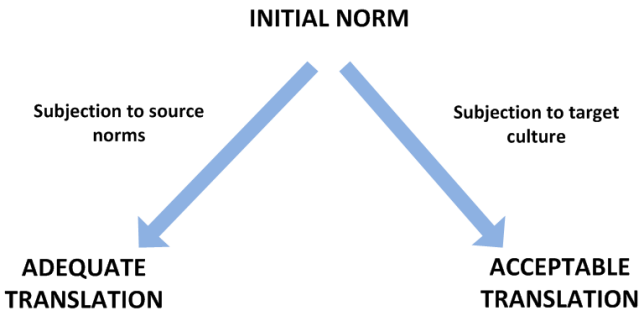


Figure 4: Toury's initial norm and the continuum of adequate and acceptable translation (Munday 2012: 173)

In the case of Polish SDH, it is rather difficult to draw firm conclusions from the point of view of the initial norm, in the sense that even though there are at least two different cultures involved – the source culture of the Polish hearing people and the target culture(s) of the Polish deaf and the hard-of-hearing – the source text (i.e. the dialogue exchanges in a Polish film or any other audiovisual production whose original soundtrack is in a foreign language) is usually in the same language as the target text (Polish subtitles). The initial norm could be manifested, though, through the use of the particular characteristics of SDH: if many of those specific attributes can be found in the target subtitles, the translation could be said to be more acceptable and better suited to the target audience. However, if the typical SDH features are rarely used, the target subtitles would be more adequate. The communicative scenario can be further complicated depending on the make-up of the target audience. For instance, if the viewers are deaf students learning the Polish oral language, the initial norm might be more determined by the acceptability pole, thus requiring the subtitlers to use simpler, more mainstream words as well as to edit the original text to a greater extent in order to allow for shorter subtitles that in turn will require a lower reading speed, so that deaf students can read and understand the subtitles comfortably whilst still enjoying the images.

A clearer differentiation can be established in the case of sign language interpreting (SLI), when the dialogue exchanges from a Polish-spoken film are signed in Polish Sign Language (PSL). The Polish language and the Polish Sign Language are two different communication systems targeted at different social

groups. An example of adequate translation, therefore relying on source norms, could be a film in Polish that is translated into Polish Signed System (PSS) – an artificial network of signs that reflects the lexis and grammar of the Polish spoken language (for a detailed discussion on the differences between PSS and PSL, see Section 3.3.3), and is sometimes used in an educational setting. Unlike PSL, it is not recognised as a language as such; therefore the translation into PSS would not be acceptable for deaf users of PSL.

The other group of norms is clustered round what Toury (1995) knows as preliminary norms, which are further divided into translation policy and directness of translation. Translation policy refers to the factors governing the choice of texts for translation into a certain language and culture at a specific time (*ibid.*). With reference to the development of SDH in Poland, and in the context of the Polish public service television, Telewizja Polska (TVP), the only provider of SDH for many years, had a translation policy that determined which audiovisual programmes would be subtitled for the deaf and the hard-of-hearing. When SDH was provided initially, and like its development in other countries, the company gave priority to the subtitling of feature films over other audiovisual genres. With the passage of time, other programmes such as soap operas and the news were also added to their repertoire (Künstler 2008).

Directness of translation concerns the level of tolerance on the part of the distributors and the audience for translating directly from the original text or through intermediate languages. In the latter case, it is about what languages they might be, which ones are preferred and why this matters. This norm would not be applicable to the intralingual SDH of Polish programmes subtitled in Polish, although it might be relevant in analysing interlingual SDH files. In Poland, most foreign films broadcast on television are voiced-over. When these films are subtitled for the deaf and the hard-of-hearing on TV, the source text used for the production of SDH is the text of the Polish voice-over script rather than a translation of the original dialogue; in other words, subtitles are prepared on the basis of the voice-over text and tend to be a rather close transcription. In such cases we can consider the voice-over file as the intermediate text (rather

than language) in the process of 'interlingual'[2] subtitling for the deaf and the hard-of-hearing.

The last category of norms proposed by Toury (1995: 58) is the operational norms that "govern the relationships […] between the target and source texts; i.e. what is more likely to remain invariant under transformation and what will change". They include matricial norms and textual-linguistic norms. The former concern "the degree of fullness of translation" (*ibid.*: 59) and are determined by omissions, additions, text relocation, segmentation or use of footnotes. In SDH, these norms are particularly relevant in the instance of verbatim versus edited versions of subtitles. The textual-linguistic norms "govern the selection of TT linguistic material: lexical items, phrases and stylistic features" (Munday, 2012: 174). As in the scenario described above concerning subtitling for deaf students, textual-linguistic norms might deal with the intentional choice of lexical items and grammatical structures that are considered easier in the Polish phonic language and account for the fact that the learners might not have mastered more complicated linguistic phenomena.

Toury focuses mostly on the descriptive dimension of norms and uses them as a heuristic tool to unravel the choices made by translators in a certain socio-cultural context and at a specific period in time. Chesterman (1997) offers another classification of norms that complement those originally proposed by Toury (1995), namely: (1) product or expectancy norms and (2) process or professional norms.

Expectancy norms are established by the expectations of the target readers of a particular translation (Chesterman 1997). The target audience might have certain expectations concerning the way in which the text should be translated, what style or register should be used, what grammatical rules should be followed, etc. (*ibid.*). These expectations are usually influenced by translation tradition in a certain country, culture, etc. In the case of SDH the target

[2] 'Interlingual' in the sense that the original language of the film is foreign and the subtitles are in Polish. However, when we consider the fact that the subtitles are created on the basis of the Polish voiceover script, they can be seen as 'intralingual'.

audience would consist of deaf and hard-of-hearing viewers and their expectations of the subtitled text. These might include the choice of language used in subtitles, but also the amount of editing, layout of subtitles, rendering of sound effects, etc. They might form such expectations on the basis of their experience in watching subtitled materials, subtitles in other countries, research or established guidelines. According to Chesterman (*ibid.*), expectancy norms allow target audiences to make evaluative judgements apropos a particular translation, as their previous exposure to similar translated products has allowed them to come up with their own ideas (and expectations) of what the target text should look like. In addition, as he goes on to clarify, the norms can be "validated by a norm-authority of some kind" (*ibid.*: 66). In the specific case of SDH, this could be professional subtitlers, academics or regulatory bodies who encourage the subtitling of audiovisual programmes according to a particular set of guidelines formulated on the basis of the target audience's expectations. These can regulate stylistic choices, give advice on the level of editing that needs to be applied or spell out how to deal with some of the technical constraints by recommending, for instance, the maximum and minimum duration that subtitles can remain on screen or the actual makeup of the subtitles so that they are not too long or too fast. In Poland, the regulatory body, Krajowa Rada Radiofonii i Telewizji (KRRiT) [The National Broadcasting Council], organised a consultation period before putting together a set of recommendations for the production of SDH. During that time everybody was encouraged to send opinions and proposals concerning the ways in which subtitling for deaf and hard-of-hearing viewers could be improved. In this sense, it could be said that the expectancy norms anticipated by the target audiences were ascertained and validated by KRRiT.

According to Chesterman's definition (*ibid.*: 67), professional norms "regulate the translation process itself" and are further subdivided into three types: (1) the accountability norm, (2) the communication norm and (3) the relation norm. The accountability norm is an ethical norm requiring translators to take responsibility for their own work. In SDH this norm would apply to the SDH subtitler responsible to the commissioner as well as to the viewers of the film. The communication norm is a social norm placing translators in the role of experts in

their field, ensuring maximum communication between the parties, i.e. between the originator and the receiver of the message. In the case of SDH, the subtitler would need to pay attention to the fact that deaf and hard-of-hearing viewers fully understand and enjoy the film. The relation norm is a linguistic norm that governs the relationship between the ST and the TT according to the nature of the text-type, the commissioner's requisites, the original author's intentions and the assumed needs or wishes of the readers and viewers (Munday 2012: 182). Such a paradigm can also be transferred to the subtitling scenario where the relationship is established between the ST of the original film and the TT of SDH in Polish, taking into account the type of audiovisual material to be subtitled – for example a talk show or a documentary or a feature film –, the guidelines of the subtitling agency, the intentions of the film director and the assumed expectations of deaf and hard-of-hearing audiences.

In general, norms can be identified when regularity of behaviour is detected in the same situations, bearing in mind that norms are specific to a particular culture and a given time in history. This does not mean, however, that a certain pattern of translational behaviour is not valid when it is not followed by the majority. It would simply involve paying a higher price for non-compliance, notably in the form of rejection by the commissioner or audience (Munday 2012). In the case of SDH, the trends observed in the display of information containing extralinguistic and paralinguistic features could constitute an example such as references to music, sound effects, tone of voice and the like. Adding the labels describing such phenomena can be understood as being optional and, indeed, some distributors or language service providers do not use them, believing that the mere transcription of the dialogue exchanges is sufficient for deaf and hard-of-hearing audiences to have full access to the audiovisual programme. As professionals resort to both approaches to deal with extra- and paralinguistic information, we can conclude that both trends exist, and it is up to the target audiences themselves to see which one they prefer. There might be a range of different reasons why labels are avoided in SDH, ranging from a lack of awareness of their function to financial considerations, as it is always faster and therefore cheaper to subtitle dialogue exchanges only rather than focus on other SDH-specific aural information contained in the

soundtrack. The price to be paid for non-compliance with these expected norms might be criticism and/or rejection on the part of the target audience.

Norms can also be placed on a continuum that spreads between absolute rules at one end and idiosyncrasies at the other, as displayed in Figure 5:

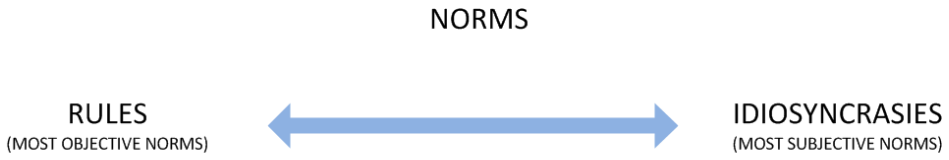


Figure 5: Spectrum of norms

If norms are strong – i.e. if they are systematically followed –, then they are more like rules, whereas if they are weaker, they can be said to be more idiosyncratic. In other words, rules might be seen as more objective norms and idiosyncrasies as more subjective (*ibid.*). In the case of SDH, the most objective norms would be those that are supported by legislation, for example the compulsory subtitling of all dialogues and any meaningful extralinguistic and paralinguistic information. Guidelines on the technical preparation of SDH files are closest to rule-like norms. Weaker norms might be reflected in the way extra- and paralinguistic information is presented, for example either small letters in square brackets, round brackets or capitals, without or in any type of bracket. We should add here that the strength of any particular norms on the continuum might well change at different periods in time. Norms that were once seen as weaker might evolve to acquire a stronger status or even become a rule. The other way round is also possible when norms lose their validity, become weaker and finally take on the status of idiosyncrasies. In the concrete case of the Polish mediascape, the amendment to the National Broadcasting Act of 2011 might serve to illustrate this point. Soon after issuing the Act, the National Broadcasting Council conducted a survey with the aim of checking whether television stations provided accessible services and, if so, to gain an idea of the amount of subtitling, sign language interpreting and audio description that was actually being delivered. It turned out that, as part of their

SDH provision for audiences with hearing impairments, some stations included scrolling texts (crawlers) that appear at the bottom of the screen to highlight the latest news (KRRiT 2012). As a result, a settlement was reached between broadcasters in June 2013, clearly defining the nature of SDH. The agreement led to the drafting of guidelines written on the basis of observed patterns in the configuration of SDH. These guidelines can be seen as norms that arose to the status of rules.

This leads us to the issue of identifying the norms. This can be achieved by analysing actual texts that have been broadcast (SDH files in the case of this research) and can be complemented with information gathered from interviews with professionals involved in the subtitling of the audiovisual programmes. Given the inherent subjectivity attached to analytical methods like interviews or surveys, Toury (1995: 55) warns against blindly relying on the statements provided by the translators or other human agents involved in the process of translation, as they might "dictate norms rather than merely account for them". To avoid this downside, the two methods are used in the present research in a complementary manner and in an attempt to corroborate the findings.

2.2.2 Audiovisual translation norms

As noted above, AVT scholars have often used DTS as the methodological foundation for their research (Goris 1993, Díaz-Cintas 1997, Zárate 2014). Norms have been investigated in studies conducted by Karamitroglou (2000) and Pedersen (2011), among many others. In the following sections I elaborate on their theoretical frameworks with the ultimate objective of discussing their relevance and research potential.

In his study, Karamitroglou (2000) concentrates on the make-up of the preliminary norms regulating the translation of children's programmes in Greece. He looks at all the factors that contribute to the subtitling and dubbing of children's programmes. Even though the results are limited to the confirmation of a given state of affairs, it is worth looking at his widely developed methodology. Karamitroglou's (*ibid.*: 69) model for investigating

norms in the field of audiovisual translation is constructed in such a way that it allows "for interference and interaction between the elements which constitute the system and the levels at which these elements / factors operate". In a way, it is an organic model, thus embracing the realisation that norms do change and evolve depending on a variety of circumstances. Table 1 offers a synoptic overview of AVT factors at different levels of the literary system.

LEVELS	**FACTORS**			
	HUMAN AGENTS	**PRODUCTS**	**RECIPIENTS**	**AUDIOVISUAL MODE**
UPPER	Attitude of agents (commissioners, translators, etc.) towards the translation of literary products in general.	Realisation of all kinds of translation products in general.	Attitude of recipients (the public) towards translation products in general.	Relation between AV media and other types of literary media (as perceived within the target culture).
MIDDLE	Attitude of AV translation agents (commissioners, translators, spotters, etc.) towards overall AV translation.	Realisation of overall AV translation products (within all film types and genres).	Attitude of recipients (viewers) towards overall AV translation products.	Relation between the three AV media: TV, video and cinema (as perceived within the target culture).
LOWER	Status and attitude of a particular AV translation product's agents (commissioners, translators, spotters, etc.) towards a particular AV translation product.	Status and function of a particular AV translation product (within its own film type and genre).	Status and attitude of a particular AV translation product's target audience.	Status and function of a particular AV translation product's medium, film type and genre (as perceived within the target culture).

Table 1: Audiovisual Translation as a Target Literary System (Karamitroglou 2000: 70)

However general the model may look, it is worth drawing attention to the human agents factor. Karamitroglou (*ibid.*: 71) rightly claims that the actions of human agents should be carefully studied while investigating AVT norms, as they are the stakeholders who either conform to, or deviate from, the norms. In AVT, the umbrella concept of human agents includes all the people involved in the production of the translated audiovisual production, be it subtitled, dubbed or

voiced-over. In his opinion, these are the "spotters, time-coders, adapters, dubbing directors, dubbing actors, sound technicians, video experts, proof-reading post-editors, translation commissioners, film distributors and finally the translator him/herself" (*ibid.*: 71). Naturally, it is not always possible to analyse the actions and motivations of all the human agents involved, or even know who they are and how they may have individually influenced the target product. In the case of the present research, even though the main focus concentrates on the behaviour of the SDH subtitlers, it is beneficial to keep in mind the wider picture of several other human agents being involved in the final product.

It is not unknown in translation practice that, when working for a translation service provider that gives priority to time and costs over quality, translators may not receive any form of feedback after their translation has been proofread and therefore do not have a chance to see the alterations made by the proofreader or to respond to them. Yet, on certain occasions, the translators themselves may be criticised for a translation that, in reality, is no longer theirs for, after the changes, it deviates substantially from the one they originally submitted. Similar situations may also occur, and do, in the case of subtitling. Even though most subtitlers tend to work with a professional subtitling program that allows them to carry out the temporal spotting of the subtitles as well as the translation, it is eventually up to the engineers and technicians to merge the subtitles with the video and make sure that the timings are synchronous during the broadcast. When the technical operations are not carried out properly, or when there have been some conversion problems, the subtitles might not have been duly synchronised with the dialogue exchanges on screen.

When discussing the concept of 'product', Karamitroglou (2000) draws attention to the various elements comprising AVT material, such as translated verbal content but also the visual and aural background. In his own words, "when transferring the textual part of an AV product, the visual and aural backgrounds are constraints that have to be constantly taken into account and that shape the final verbal product" (*ibid.*: 72). As he emphasises, the human agent responsible for subtitling an AV product cannot manipulate the audio or visual semiotic cues

of the original, and her/his translation needs to be in consonance with them if the final product is not to alienate the target audience.

'Recipients' is the next element in Karamitroglou's model. He makes a clear distinction between 'recipients' and 'the public' and explains that 'recipients' constitute the specific group of people for whom the final product is intended. They are the assumed to be the target audience being considered by the human agents undertaking the translation. An example from the field of SDH might be the distribution of subtitled material aimed at deaf and hard-of-hearing people, i.e. the recipients, which is also enjoyed by some of the hearing viewers, i.e. the public, who either happen to be in the cinema, or are watching television and want to use the subtitles in order to follow the dialogue exchanges better, with a view perhaps to learning Polish or to avoid disturbing a sleeping baby or a neighbour. Indeed, the term used to refer to subtitling for the deaf and the hard-of-hearing already raises an interesting issue. As the expectations and needs of these two groups of recipients are significantly different, subtitlers need to make a decision as to whom a particular product is actually being aimed (see Section 3.3.2 for a discussion on the differences between deaf and hard-of-hearing people).

The fourth pillar in Karamitroglou's model is the notion of 'mode', which he understands as the relationship between audiovisual and other types of translation (such as written translation) or between different media (television, video cassette, cinema). In the current research, this concept is most relevant when discussing the normative differences encountered between subtitles created for public service TV, private TV, DVD publishers and NGOs. As we will see in Chapter 6, norms related to subtitle display rates, levels of editing and the representation on screen of extra- and paralinguistic elements change not only over time, but also vary depending on the distribution channel for which the subtitles have been produced. An illustrative example is the fact that subtitle speeds for public service television can be significantly different from those observed in DVD subtitles (they are usually lower).

Pedersen (2011) is another AVT scholar who draws on the DTS paradigm and studies norms. His notions and disquisitions are very pertinent to the current research. In his analysis of subtitling norms, he focuses on the translation of extralinguistic cultural references (ECRs) from a corpus consisting of Danish and Swedish subtitling files from 100 films and television programmes.

Pedersen's analysis of technical norms, especially those influencing reading speed, is particularly relevant to the present project, as he states, "many of the subtitlers' decisions are […] affected by [the technical aspects], regardless of whether these decisions are linguistic, stylistic or cultural" (*ibid.*: 130). To reach his conclusions, he investigates three areas that can be quantitatively measured: (1) expected reading speed, (2) subtitle density and (3) condensation rate. Expected reading speed is the maximum speed at which the reader is assumed to be able to read a subtitle on screen. It is measured by dividing the number of characters found in a subtitle by the number of seconds the subtitle remains on screen. This operation gives the number of characters that the viewer is expected to read every second a subtitle is shown on screen, measured in characters per second (cps). Subtitle density refers to the number of subtitles contained in a given TT, as measured by the number of subtitles that appear every minute. This calculation is based on the overall number of subtitles that are contained in the TT divided by its total duration, measured in minutes. Lastly, condensation rate is a parameter that computes the quantitative difference in word count that exists between the ST and the TT. In the analysis of the Polish SDH corpus analysed in this research, the expected reading speed or, as it was later called, the subtitle speed, is one of the main features focused on. The other parameters, even though tentatively referred to when analysing editing, are not focused on in detail.

In his work, Pedersen (2011) conducts an in-depth diachronic and comparative study between different countries and languages of the technical norms that regulate the delivery of interlingual subtitles and fall under the category of matricial norms in Toury's (1995) nomenclature. In my research, however, I focus on the diachronic investigation of SDH norms in Poland only, based on material produced by the Polish public service television (TVP) and other

national stations, and with reference to DVD publishers and NGOs where appropriate. The study of subtitle speeds, levels of editing and the transfer of extra- and paralinguistic features in SDH files produced by TVP, private stations, DVD publishers and NGOs can be included mainly under the operational norms defined by Toury (1995). However, if and when relevant, other classifications will be also explored (see Chapter 6).

2.2.3 Patronage

According to Lefevere (1985: 226), literature is one of the cultural systems operating within a wider social system, or, in other words, "a society, a culture is the environment of a literary system". He further claims that any given literary system to which translation belongs is controlled by two distinct elements: (1) professionals such as interpreters, critics, reviewers, teachers and translators, who are part of the literary system and control it form the inside and (2) patronage, i.e. individuals, groups or institutions that control the system from outside. Of these two elements, it is the concept of patronage that is particularly relevant in this research. Patronage signifies "the powers (persons, institutions) which help or hinder the writing of literature" (*ibid*.: 227); and "can be exerted by persons […], groups of persons […], a social class, a royal court, publishers […] and, last but not least, the media" (*ibid*.: 228). In the past, patronage was bestowed by rulers and aristocrats. Nowadays, the function still exists, but it has been taken over by other patrons more in line with the new digital times. As Díaz-Cintas (2004: 28) observes, "compared to the literary world, audiovisual products are a lot more exposed to commercial forces, a fact that opens up additional opportunities for manipulation and for avenues of research".

In Lefevere's (1985) view, patronage consists of three main elements which can interact with each other: (1) the ideological element, (2) the economic element and (3) status. In the context of the current research, the role of ideological patronage might be played by institutions and bodies working in the interests of deaf and hard-of-hearing people, for example by issuing directives or laws about the provision of SDH. An instance of an economic element could be related to the monetary and commercial interests of the companies concerned.

Some might put their financial gains above the quality of the subtitles, trying to produce subtitles as quickly as possible or by employing amateur subtitlers. Finally, the concept of status plays an important role in the case of subtitler visibility. For many years subtitling was not really recognised professionally, but the situation is now changing rapidly and more and more often subtitlers' names are recognised in the end titles, and their work is being socially acknowledged. Undoubtedly patronage plays a very important role in the shaping of the subtitles as a product and the subtitling industry as a system, and more attention is therefore paid to it in the following chapters.

2.3 Interviews

Descriptive Translation Studies and Audiovisual Translation constitute, then, the overall scope within which the present project is set. In terms of the research material used to investigate the evolution of SDH norms in Poland, and in addition to the numerous subtitle files obtained from the various TV broadcasters, I also rely on interviews conducted with professional subtitlers in an attempt to corroborate the findings. The findings from the interviews are backed up by the analysis of the subtitle files, and the latter are also analysed in the light of the information gleaned in the interviews.

When studying the original SDH files created in the early years of the service provision in Poland, numerous questions arise as to why certain solutions were given priority over others. Similarly, when watching the current intralingual subtitles on Polish public service and private television, and when comparing them with the ones used for DVD distribution, doubts and questions about the application of certain standards have surfaced. In order to be able to ascertain the reasons behind any given subtitling behaviour, interviewing professional subtitlers seems to be an efficient and productive way of gaining a greater understanding of the nature of Polish SDH. As mentioned previously, subtitlers play a key role as human agents (Karamitroglou 2000) and crucial stakeholders in the production and dissemination of SDH. Interviewing is used here as a qualitative rather than quantitative research method in order to gain more knowledge about the practice of SDH in Poland from a subtitler's point of view.

Interviews may also provide an insight into professional norms, as is noted by Chesterman (1997) (see Section 2.2.1).

The present section concentrates on the theoretical justification for the use of these two main sources of information, notably interviews with practitioners and professional subtitle files. Chapter 6, on the other hand, focuses on the actual implementation of the analysis and the discussion of the results.

As Kvale (2007:1) claims, "the research interview is an inter-view where knowledge is constructed in the inter-action between the interviewer and the interviewee". It is a conversation on the basis of which the interviewer tries to find out the interviewee's experience concerning a certain topic and is able to ask further clarifying questions to ascertain the interviewee's views and opinions in their own words (*ibid.*). The difference between an interview and a regular conversation lies in the fact that the focus is on the participant, who does most of the talking (Magnusson and Marecek 2015). Conducting interviews is a very efficient way of gathering information from professionals working in a field in which the researcher is interested. As Pérez-González (2014) points out, used frequently in areas such as sociology, education and psychology, to mention but a few, it is a relatively unexplored area of Audiovisual Translation. As we have already mentioned, Karamitroglou's (2000) research on revoicing and subtitling children's programmes on Greek television would seem to be an exception. The interview is an important part of the methodology in terms of eliciting information from human agents, though he himself decides to use a questionnaire as a more functional and operative tool and conduct only unofficial mini interviews to clarify some of the responses, a strategy also often employed by other researchers (Fuentes Luque 2000, in Pérez-González 2014). Unlike questionnaires, which might have a purpose in preliminary and large-scale surveys, interviews are used on a smaller scale and tend to allow for more in-depth analyses (Gillham 2005). However, the terms 'interview' and 'questionnaire' are often used interchangeably (Wilder 2004, in Pérez-González 2014).

Interviews can be divided into three main groups: (1) structured, (2) semi-structured, and (3) unstructured. “The structured interview is at the quantitative end of the scale, and more used in survey approaches” (Edwards and Holland 2013: 2). The other two types of interview belong to qualitative research and “are characterised by increasing levels of flexibility and lack of structure” (*ibid*.: 3). The structured interview, or closed fixed-response interview as it is termed by McNamara (2009), implies that all interviewees are asked exactly the same questions, and there is a limited set of responses from which to choose. In a semi-structured interview the researcher follows a predetermined set of questions and subject areas, but can also be flexible and deviate from the script in a relevant situation. Finally, unstructured interviews follow a clear plan on the researcher’s part, are characterised by a certain degree of formality, but do not make use of a preordained structure.

Qualitative semi-structured interviewing involving the interactional exchange of dialogue, with a thematic but flexible structure, and allowing for meanings to be created during the interaction, has been used in the current research, as it is considered to be the best form of interviewing in this particular instance. In order to standardise the collection of data and thus be able to establish some potential connections with the material contained in the subtitle files, I aimed to retrieve the same type of information from all respondents. So, although the same topics were covered in all interviews, questions were not always asked in the same order, but rather followed the flow of the participants’ responses. Also, when appropriate, other related avenues were explored with the help of further questions. In a nutshell, the interviews aimed to elicit as much information about SDH preparation from the subtitlers as possible, asking them about the reasons behind the use of certain strategies and other similar questions.

Research interviews can be conducted face-to-face, on the phone, via MSN messenger, via e-mail (Opdenakker 2006) or computer-mediated face-to-face with applications such as Skype or WhatsApp. They can also be grouped according to location and time synchronicity. Table 2 shows the interrelation between different communication platforms for interviews and time:

	Time	Place[3]
Synchronous communication	Face-to-face MSN messenger Telephone *Computer mediated audio and video communication tools [added by the author]*	Face-to-face
Asynchronous communication	E-mail	E-mail MSN messenger Telephone *Computer mediated audio and video communication tools [added by the author]*

Table 2: Interview communication platforms based on Opdenakker (2006)

All these types of interview might be relevant in different situations, depending on what the focus of the actual interview is as well as on the time and financial resources available to the interviewer and interviewees. If it is important for the research project that certain social topics are broached during the interview, the face-to-face scenario might be the optimal solution, whether in the same physical space or computer-mediated. If, however, a degree of anonymity is preferable, then interviews conducted by phone or e-mail might be better. When time and money are of concern, interviews that are asynchronous in place tend to offer the best results. In the case of this thesis, I have decided to use Skype (a computer mediated audio and video communication tool) as a way of carrying out the interviews, due to the reasons discussed below. Interviewing via Skype falls into the category of synchronous communication as far as time is concerned, and asynchronous as regards place. It was the most convenient interview approach, as we could see each other while talking and make the most of communicative cues such as body language. We could also ensure the reception of any extra information and act on it, for example by asking further clarifying questions. In addition, the fact that we were in our own homes contributed to a more relaxed atmosphere during the interview. It was also easy

[3] As Opdenakker (2006) explains, place is meant here as "real place" and not "virtual place".

to find a date and time that would suit both the interviewer and interviewee. Most of the subtitlers that took part in the study live in Poland whereas I am based in the UK. The use of Skype helped us to connect without the extra cost of travel. In general, this computer-mediated approach proved to be very successful in collecting the required information.

Interview structure and procedure

A typical semi-structured interview is characterised by the following aspects: (1) it contains open questions, (2) it promotes a responsive or interactive relationship between the interviewer and the interviewee, allowing for clarifications and further explorations, and (3) it adheres to the structure and purpose established by the interviewer, despite naturally occurring deviations (Magnusson and Marecek 2015). Also, questions asked during the interview should have two main aims: (1) to encourage interviewees to share personal stories and reflect on their experiences, and (2) to provide material related to the topic of the interview (*ibid.*). In addition, as a sign of good practice, it is advisable to have a balanced mix of open-ended and closed-ended questions, so that researchers can have easy-to-score data at their disposal (Burke and Miller 2001). All these recommendations were followed when designing and conducting the interview for the purpose of the current research (see Chapter 6).

In terms of the preparation for the interview, according to Burke and Miller (2001), before the actual interview starts, participants should always receive information about the researcher, the project and the topic of the interview. They should also have been assured of the confidentiality of their responses, how the results of the research project will be used and, finally, how long the interview is likely to last (*ibid.*). This type of information was shared with the participants via email before the scheduled meetings, as explained in detail in Chapter 6.

2.4 Files analysis

SDH files are yet another methodological tool used in this research project. A substantial number of SDH files (131) that had been commercialised in Poland were obtained from subtitlers and the public service TV station and form the main corpus for my analysis. The sample of files is divided into three main groups: files from the public service TV, files from private stations and files from DVD-NGOs.

Several television stations and audiovisual programmes were targeted to enable a decision on which files to analyse, so as to conduct a study that could provide a varied base for the investigation of SDH norms.

Like the interviews, the corpus and analytical procedure are described and explored in the methodological section contained in Chapter 6.

3 ACCESSIBILITY SERVICES

This chapter discusses the three main media accessibility services in existence, namely audio description (AD) for the blind and the partially sighted, sign language interpreting (SLI) and subtitling for the deaf and the hard-of-hearing (SDH). The first – AD – is presented here merely for illustration purposes, in an attempt to give as complete a picture of as many of the available accessibility services as possible and to foreground the various assistive services that are of benefit to the different types of users with sensory impairments. SLI is more closely related to SDH, as their recipients are characterised by the inability to hear, though this varies depending on their level of deafness. SDH receives the most attention in this chapter. The sections dedicated to SDH focus on the definition and investigation of deafness, on the profile of the target audiences and their language-related challenges, as well as on the various platforms that allow for the creation and distribution of SDH in Poland.

3.1 Audio description

Audio description (AD) provides a descriptive narrative for the visual elements that appear in the different media (Greening and Rolph 2007) or for live performances. Fryer (2016) also notes that using speech AD makes AV materials accessible to people who cannot see the visuals. AD takes advantage of the gaps between dialogue exchanges to describe the action taking place on screen, the background, the way in which the characters are dressed and their gestures, the source of certain sounds that may not be clear and the like (BBC 2018a) so that blind and partially-sighted people are able to follow the plot of the programme. In a nutshell, AD is a source of information about actions, characters, scene changes, on-screen text and other visual content (The American Council of the Blind 2018) that is relevant to the understanding and appreciation of the audiovisual programme. In the case of the performing arts, AD provides information on body language, facial expressions, body movements and lighting effects (Audio Description Association 2018). The main rule in AD is to include information that will clarify the ‘when’, the ‘where’, the ‘who’, and the ‘what’ for the visually impaired audience (Rai *et al.* 2010). Even

though it has traditionally accompanied programmes broadcast on platforms such as television, commercialised on DVD, and performed in the theatre, AD is more usually an assistive service offered in galleries, museums, heritage sites, churches and sports venues, to name but a few.

From a historical perspective, AD originated in the theatre to describe live performances. In the USA, in 1981, Margaret and Cody Pfanstiehl collaborated with Arena Stage in Washington, DC, to prepare AD for live theatrical shows (Snyder 2014). A few years later, in 1987-88, television programmes began to be supported by pre-recorded AD (*ibid.*). In Europe, the UK was one of the first countries to introduce AD on television in 1994 (The World Blind Union 2011) as part of the Independent Television Commission's AUDETEL Project, which was conducted between 1992 and 1995. Soon afterwards, the 1996 Broadcasting Act included a mandate for "audio description via terrestrial digital transmissions" (Greening and Rolph 2007: 128).

As far as Poland is concerned, the inception of AD can be traced back to 27 November 2006, when the film *Statyści [Extras]*, directed by Michał Kwieciński, was shown with audio description in a cinema in the city of Białystok. Since 14 June 2007, when TVP showed audio described episodes of a popular series *Rancho [The Ranch]* via its interactive platform iTVP*,* viewers with visual impairments have been able to enjoy audio described programmes on television (Szymańska 2008). As in the case of SDH, TVP was once again the first TV station to introduce AD into Poland.

AD is intrinsically connected with SDH as regards legal regulations on audiovisual media accessibility in Poland. Indeed, Article 18a of the Amendment to the National Broadcasting Council Act (Komorowski 2011), issued in 2011, states that 10% of programmes broadcast on television must be accessible to people with sensory impairments, but crucially does not specify the particular percentages dedicated to SDH, AD or SLI, unlike in other countries, e.g. the USA and the UK (see Chapter 4). Thanks to the initiatives led by the recipients and various associations, in 2013 Krajowa Rada Radiofonii i Telewizji (KRRiT) [the National Broadcasting Council] – a constitutional body that looks after the

public interest in radio and television broadcasting – facilitated the signing of a self-regulatory act of broadcasters, who agreed that they would provide a total of 11 hours of audio described programming each per quarter of a year on TVP1, TVP2, Polsat and TVN. The other stations that signed the agreement pledged that they would deliver six hours of AD each per quarter of a year (KRRiT 2013). In July 2015, following public consultations, the National Broadcasting Council issued a statement regarding AD, stressing the legal obligations of the broadcasters, defining AD, specifying the aim of this assistive service and its intended recipients and offering detailed information on the basic standards that needed to be adhered to when creating AD and stipulating the technical means of delivery (KRRiT 2015b). Such an initiative can be seen as the right step towards the promotion of a wider awareness of AD amongst the broadcasters and the other stakeholders. In March 2018, in another amendment to the National Broadcasting Council Act, Article 18a was changed to oblige broadcasters to provide 50% of accessible programming, including AD, SDH and SLI (Kuchciński 2018). At the time of finalising this thesis the National Broadcasting Council was leading public consultations on the implementation of the law. All such actions are contributing to the improvement of the quantity and quality of audio described programmes in Poland.

3.2 Sign Language Interpreting

The professional practice of interpreting, whether simultaneous or consecutive, is nowadays very well established, with highly educated and trained professionals. However, sign language interpreting is a much younger profession (Kyle and Woll 1985), and training seems to be lagging behind. As in the case of sign language research, Scandinavia and the USA lead the way in sign language interpreting (*ibid.*). However, with growing social awareness concerning the communicative needs of Deaf people and the recognition of sign languages as genuine official languages, other countries have followed suit in developing sign language interpreting services. In Poland, Stowarzyszenie Tłumaczy Polskiego Języka Migowego [Association of Polish Sign Language Interpreters] was established in 2009 to ensure the continuous improvement of the interpreters' skills, to facilitate the sharing of knowledge and to guarantee

that customers are offered a quality service (STPJM 2018). With Ustawa o Języku Migowym i Innych Środkach Komunikowania Się [Act on Sign Language and Other Systems of Communication], passed in 2011 and fully in operation since 1 April 2012 (Kancelaria Sejmu [Administrative Office of the Parliament] 2011), Deaf citizens gained the right to interpreting services when dealing with public administration. Before the act, it was the task of the Children Of Deaf Adults (CODA) to interpret for their parents. Now, they are able to access health services, contact police, the fire brigade and other areas of public administration for free in their chosen communication system, be it PJM (Polski Język Migowy [Polish Sign Language]) or SJM (System Językowo-Migowy [Signed System[4]]), an artificial communication system based on Polish phonic language, invented in order to facilitate communication between deaf and hearing people. They can also use other systems enabling communication such as e-mail, text messages, audiovisual communication over the internet, and the like. In addition, the act called for the creation of a register for interpreters fluent in any of the communication systems, as well as for the establishment of the Polska Rada Języka Migowego (Polish Council of Sign Language), an advisory body responsible for collecting recommendations for using sign language and systems, promoting sign language, writing opinions about the effects of the act and improving solutions influencing the communication of people with sensory impairments (*ibid.*).

Like spoken language interpreting, or even translation, the main role of sign language interpreters is the transfer of concepts and meaning rather than rendering word-for-word messages (Mitchell 2014). It is the overall intended meaning of the message, rather than individual words, that should be transferred (Kyle and Woll 1985). What is so unique in a sign language interpreting scenario is "the situation of the users of the language and the community's attitude towards them" (*ibid*.: 229). Sign language interpreters are hearing individuals who have mastered sign language, and this is the reason why they can transfer messages to the Deaf community. However, unless they

[4]Also referred to in this thesis as PSS (Polish Signed System) or SP (Signed Polish).

have been raised in a deaf family who use sign language, they are not necessarily native signers.

In SLI, just like spoken language interpreting, a distinction can be made between simultaneous and consecutive interpreting services. When it comes to in-vision interpreting on television, the simultaneous method is prevalent. However, the offer of this service is rather limited on television, with most news and live programmes being subtitled rather than interpreted. This means that sign language users cannot access all television programmes in their mother tongue even if they are able to read subtitles. Another factor with an impact on Deaf people's access to television is their interests. TV shows, films or series rarely focus on Deaf people's values. Even though the Deaf lead their lives amongst a hearing majority, their experiences as a Deaf community can be very different, with different challenges, views and expectations. Programmes specifically targeting Deaf communities, or even starring Deaf characters, are unique occasions for Deaf audiences to enjoy information or entertainment that is more relevant to their lives.

In the UK, there were some attempts to broadcast programmes in sign language for Deaf children and adults in the 1950s and 1960s. But they were soon taken off air due to the action of some members of the oralist movement and the hard-of-hearing community, who actively campaigned to remove sign language from television (Ladd 2003). In the 1970s, the BBC started showing the *SeeHear* series for the Deaf, which still continues to be broadcast to this day. In the 1980s, Channel 4 started broadcasting *Listening Eye* (later known as *Sign On*), but it was discontinued after 15 years.

In the USA, audiovisual productions targeting the Deaf community were relatively common between the 1970s and the 1990s, with programmes such as *Deaf Mosaic*, which was broadcast from Gallaudet in the USA – the world's only university without any barriers for deaf and hard-of-hearing students – or *Rainbow's End*, a production aimed at children.

According to Szczepankowski (1997), Sign Language Interpreting first appeared on Polish television in the late 1970s and, in 1980, TVP started broadcasting a programme for deaf people entitled *W świecie ciszy* [In the world of deafness] in which Signed Polish (SP), was employed. From 1994 until 1996, Ewa Juchniewicz and Marta Boruń presented a series of children's programmes also in SP that played not only an entertaining, but also an educational role in the lives of deaf children and their hearing counterparts. A year later, in 1997, TVP2 showed the series *Dlaczego to my?* [Why us?], where some of the acting roles were played by deaf teenagers (*ibid*.).

Nowadays, Signed Polish tends to be used alongside Polish Sign Language on public service television, unlike in other countries such as the UK and USA where BSL and ASL respectively are used. Moreover, in Poland it is never clearly stated which of the two varieties of SLI will be available for a particular programme. As representatives of the audience stated in the feedback on the consultation organised by the National Broadcasting Council in May-June 2012, following the implementation of Article 18a, the needs and expectations of Polish Deaf viewers stipulate that programmes should be supported with Polish Sign Language, not SP. Private stations are also starting to provide signed language interpreting, with companies like Canal+ using PSL in cartoons for children.

According to the recent yearly reports by KRRiT (2017, 2018a) regarding the provision of accessible services on Polish television stations, there are fewer programmes supported with SLI than with SDH. In 2016 programmes with SDH accounted for 12% of television programming, whereas programmes with SLI only for 3%. In 2017, the respective numbers were 13.6% for SDH programmes and 2.7% for SLI (*ibid.*). This situation can be said to be similar to that of other countries, where the amount of signing on television has always been significantly lower than for subtitled programmes. There are numerous reasons behind this state of affairs. One is that the number of people who actually know sign language is relatively small – around 50,000 in the case of Poland (Szczepankowski 2002). Then, the population of hearers that knows sign language and can act as interpreters is even smaller, which makes

communication challenging from a professional perspective. In the case of the UK, for instance, according to research carried out in 2005 by Ofcom – the independent regulator and competition authority for the UK communications industries –, there are about 66,000 people in the UK who can use sign language well enough to understand it on television. However, many of them confirm that they prefer to watch TV with subtitles rather than signing (Ofcom 2007). As it turns out, this is most convenient for broadcasters, as SLI is considerably more expensive than SDH. Besides, some people might choose subtitles over signing because they want to learn to read or want that their deaf children to improve their knowledge of language by being exposed to its written form. Another factor with an impact on the little provision of SLI on TV is the fact that, as sign language interpreting is only available in an open format – that is to say that viewers are not able to switch it off – hearing audiences complain about the distraction it causes. The result is that the number of productions with SLI is rather limited, and these programmes tend to be broadcast late at night. As mentioned previously, in the case of Poland, the situation is compounded by the fact that some of these few signed programmes, particularly on TVP, are broadcast in SP rather than PSL, thus further reducing the number of viewers.

3.3 Subtitling for the deaf and the hard-of-hearing

Subtitling for the deaf and the hard-of-hearing is the third accessible service on audiovisual media discussed here and is the main focus of the present research. Differentiated from standard interlingual subtitling by its use of character identification, description of sounds and music, and the addition of paralinguistic information, and presented on screen in the form of labels or use of different colours, SDH is perhaps the most popular service on television accessible to people with different levels of hearing loss. Below, I expand on matters related to SDH, some of which are also relevant in the case of SLI, as both services meet the needs of viewers with hearing impairments.

3.3.1 Introduction to deafness

The aim of this chapter is to provide a background for research on subtitling as a service dedicated to people affected by hearing loss. In order to understand their needs with relation to audiovisual media access, it is essential to be aware of the types and degrees of deafness as well as the extent to which this sensory impairment affects and impinges on language acquisition, education and identity. This chapter, which is divided into appropriate sections, examines the topics of deafness from a medical, cultural and educational point of view and presents the interrelations between them. An in-depth analysis of these topics sheds more light on the potential expectations of SDH recipients.

3.3.1.1 Definitions

People with hearing impairments can be affected by different levels of hearing loss, ranging from mild to profound. Both their cultural affiliation and their first language (be it phonic or sign language) are other features that play an important role in the place these citizens have within society. This is highlighted by Neves (2005: 84) as follows:

> Given that hearing loss can be found in various degrees and can be classified according to various parameters, there is often difficulty in drawing a line between hard-of-hearing and being deaf. Deafness may be defined in terms of audiological measurements, focusing on the causes and severity of the impairment, but it can also be seen in terms of social integrations and language usage.

In terms of audiological measurements, and according to Action on Hearing Loss (n.d.a: online), in the UK, 'deafness' can be divided into four different levels:

Mild deafness	25-39 decibels
Moderate deafness	40-69 decibels
Severe deafness	70-94 decibels

Profound deafness	Over 95 decibels

Table 3: Levels of deafness (Action on Hearing Loss, n.d.a: online)

People suffering from mild to severe deafness are referred to as 'hard-of-hearing' in English, whereas in Poland they are described as *słabosłyszący* or *niedosłyszący*, which literally translates as 'poor hearers' (Szarkowska 2010). When it comes to people described as 'deaf', the terminology is less consistent across languages. In the USA and Canada, for instance, it means people who have total hearing loss (Shield 2006) and, similarly in Poland, *głuchy* [deaf] refers to people with total and profound deafness. In the UK, however, the word 'deaf' refers to people with any degree of hearing loss. It is used interchangeably with the term 'hearing-impaired', which in the USA is regarded as a rather derogatory description and is therefore avoided. 'Deafened', *ogłuchły* in Polish, is used to describe people who have lost their hearing gradually or suddenly, but always after having learnt to speak.

Although the term 'deaf' is normally used in English to describe a medical condition and refers generally to those with profound deafness, some deaf people prefer to describe themselves as 'Deaf', with a capital 'D', in order to stress the fact that they are not only medically deaf but that they also belong to the Deaf community, which has different values and habits from those of the hearing community. These individuals are usually, though not always, prelingually deaf, that is to say that they were born deaf or have lost their hearing before the acquisition of spoken language and, as a result, sign language is their primary means of communication. In this thesis, the following distinction is made between these terms:

- The expressions 'deaf and hard-of-hearing' (DHOH), and 'people with hearing loss' are used to refer to people with any kind of hearing impairment, including the Deaf. It is important to note that members of the Deaf community consider the term 'hearing-impaired' inappropriate and prefer the terms 'deaf' and 'hard-of-hearing' to be used (Roberts 2008).

- The term ‘deaf’ is used when talking about profoundly deaf people from a medical perspective, and also includes the Deaf.
- The term ‘Deaf’ is used when making distinctions between ‘deaf’ people in medical terms and those belonging to the Deaf culture.

There are two different types of deafness depending on where the problem is located. **Conductive** hearing loss takes place when sounds cannot pass from the outer ear to the inner ear. It often happens due to a blockage (earwax or glue ear), is usually temporary and can be treated (Action on Hearing Loss, n.d.b: online). **Sensorineural** hearing loss happens when there is a damage to the sensitive hair cells inside the inner ear or to the auditory nerve. This may be the result of aging or an injury (*ibid.*). Figure 6 below shows the composition of a human ear in detail.

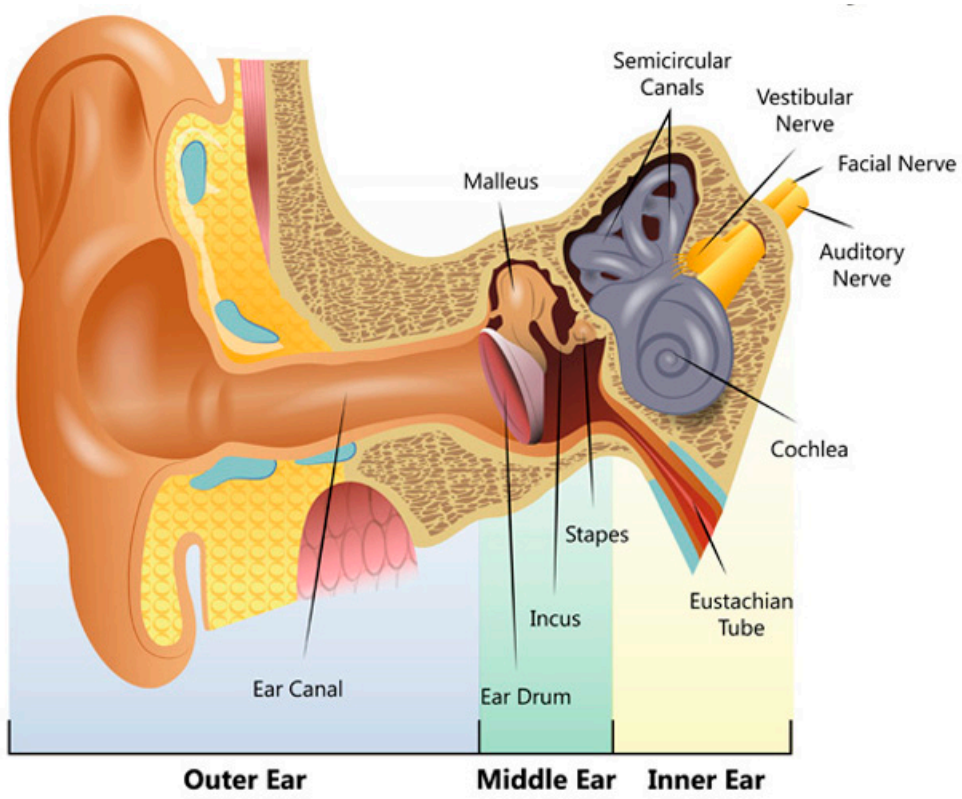


Figure 6: Diagram of the human ear (Hearinglink n.d.b: online)

The aetiology of sensorineural hearing loss is varied, with congenital and acquired causes. Congenital causes may be genetic, non-genetic or unknown. Acquired causes include noise, trauma, presbycusis, infectious diseases, and

therapeutic drugs, to give only a few examples.[5] Sensorineural hearing loss is permanent and hearing aids are sometimes required.

Hearing loss is very common in today's society. According to the World Health Organisation (WHO 2018), about 466 million of people worldwide – 5% of the world population – suffer from a disabling hearing loss, that is to say hearing loss greater than 40 dB in the better hearing ear for adults and 30 dB for children, but about 15% have some hearing loss. WHO estimates that by 2050 there will be 900 million people – that is to say 1 in 10 – with a disabling hearing loss of some kind.

According to the European Federation of Hard-of-hearing People (EFHOH 2011), there are over 50 million deaf and hard-of-hearing individuals in Europe, which amounts to around 7% of all Europeans. In the UK alone, it is estimated that there are 9 million deaf and hard-of-hearing citizens, of whom 6.5 million are over the age of 60 (Roberts 2008), from a total population of 61 million in 2008.

In Poland, it is notoriously difficult to obtain reliable data regarding the total number of deaf and hard-of-hearing people in the country, as the various sources provide different figures, which tend to be mere approximations. According to Biuro Prasowe Kongresu Kobiet [The Press Office of Women's Congress] (2011), about 900,000 people in Poland live with a serious hearing impairment, and over 6 million citizens have some sort of hearing loss. Taking into account that, according to the latest official statistics (GUS 2012), the population in Poland in 2011 numbered 38,511,800 inhabitants, the percentage of citizens affected by hearing problems is therefore over 15%, which is in line with WHO's estimate for people with hearing problems worldwide. Some 100,000 people are members of Polski Związek Głuchych (PZG) [Polish Association of the Deaf]. The number of PSL users is not exactly known. While Szczepankowski (2002) believes it to be around 50,000, Czajkowska-Kisil and

[5] For the specific aetiology of the causes of hearing loss, see Roberts (2008).

Laskowska-Klimczewska (2014) estimate it to be somewhere between 10,000 and 50,000.

3.3.1.2 Deaf identity

'Deafness' is a notion mostly used in a medical sense. As shown above, there are various levels and types of deafness, and they all relate to the medical condition of a person affected by hearing loss. If we see a deaf person as somebody with an impaired sense of hearing and concentrate only on this medical fact, the concept of disability comes to the fore. However, deaf people can also be seen as members of communities with their own culture and language, just like many other cultural groups. Viewed from this perspective, they are not perceived as 'disabled', but rather as another social group like the Cubans or Danes.

As distinct from 'deafness', the term 'Deafhood', coined by Ladd (2003), refers to a Deaf person's struggle for identity and to explain their existence both to themselves and to other Deaf people. The concept of 'Deafhood' incorporates the process of becoming and maintaining the status of 'Deaf', as well as functioning as a Deaf individual in a Deaf community (*ibid.*). Another important aspect that defines 'Deafhood' is the onset of the condition. In this sense, people who are born deaf or become deaf very early in their lives do not experience any loss. They are unaware of the sensation of sound and, as a consequence, do not see themselves as missing out on anything. 'Deafhood' brings to the fore the linguistic and cultural richness of their reality, a reality in which they feel comfortable (*ibid.*). Deaf people see themselves as members of the Deaf community, meaning that they share the same language, experiences and values (Baker and Padden 1978: 4), which can be altogether different from those shared by hearing people. The Deaf community is characterised by a proud attitude towards their condition, the so-called 'attitudinal deafness', which means that a person sees her/himself as a member of the Deaf community and is accepted as such by its members (Ladd 2003). The sense of belonging to the Deaf community helps the Deaf to understand and shape their identity and, as a

result, to function better in a wider society in which the majority is made up of hearing individuals.

History undoubtedly plays a huge role in shaping 'Deafhood'. Like other social minorities, years of struggle to earn the right to use their own language in education as well as in everyday life have added to the feeling of Deaf pride and Deaf identity. The phenomenon of deafness is as old as humanity, with writings about the deaf going back to Ancient Greece and Rome, and even the Old Testament (Szczepankowski 1998). Through the ages, the deaf have been treated better and worse, but it was not until the 16th century that some countries started providing people with hearing loss with the opportunity to embark on an educational voyage (*ibid.*). In the 18th century, the concept of segregation started to be formed. Special units were established to provide rehabilitation and education for the deaf. This attitude continued throughout the following decades leading to their exclusion from the hearing society. Even though people with hearing loss have the same rights and responsibilities as other citizens thanks to the 1993 UN resolution on the Standard Rules on the Equalization of Opportunities for Persons with Disabilities (*ibid.*), the reality is that the idea of deafness as a limiting and excluding disability is still prevalent and commonplace among many citizens.

Language is a prime factor that brings nations and groups of people together. It helps us make sense of the world and describe the way in which we see everything around us. Simply put: languages build cultures. As Ladd (2003: 230) claims, "if a group of people have their own language, then they will also have their own culture". Sign languages are major communication tools enabling Deaf people to form their own communities and cultures. However, bearing in mind that only 10% of deaf children are born to deaf parents, 90% of children do not have the possibility of being part of the deaf community from the beginning of their lives. Raised in a hearing environment, probably using hearing aids or implants, they are mainly part of the hearing community without any, or with little, contact with other deaf people. In such circumstances, they develop a hearing identity, sharing the values and beliefs of the rest of their family members.

A lot of deaf children attend inclusive schools, units within mainstream schools, etc., where they might or might not meet deaf peers who share similar experiences. It often happens that deaf people start reaching out to deaf communities only in their adulthood. They may or may not start learning sign language from an early age and develop a deaf identity. Such a scenario can set the basis for the changing or evolving identities of deaf people, who at one stage of their lives might feel like belonging to a hearing community, and at another, being part of a Deaf community. To account for a social situation of this nature, McIlror and Storbeck (2011) not only explore deaf (culturally hearing) and Deaf (culturally Deaf, use of sign language) identities, but they also investigate the bicultural identity of being 'DeaF', which allows for transitions between hearing and deaf communities. The capital 'F' in the term represents the fluid interaction between Deaf and hearing communities (*ibid.*). Research conducted by authors like Bat-Chava (2000), Foster & Kinuthia (2003), Holcomb (1998), Israelite *et al*. (2002), Kent (2003), Leigh (1999), Maxwell-McCaw (2001) and Nikolaraizi and Hadjikkou (2006) highlights the crucial importance of education in shaping a deaf person's identity. It is children who attend deaf schools who tend to have the strongest Deaf identity but, at the same time, struggle with communication outside the school environment (Breivik 2005).

In Poland, Deaf identity started forming around the group of children who attended the first school for the deaf, which was founded in 1817 in Warsaw (Czajkowska-Kisil and Klimczewska 2007) by a priest called Jakub Falkowski, who preferred to use a visual method of teaching the deaf. At that time, one third of the teachers were themselves deaf (Świdziński 2005), which helped to build and develop Polish Sign Language. Nowadays, in contrast to the beginnings of deaf education in Poland, there are paradoxically very few deaf teachers who know PSL, and those who do are respected by the students and become role models for them. Most of the teachers, however, use the Polish Signed System, an artificial visual communication system based on Polish phonic language. For many pupils, starting education in a specialist school for the deaf means that for the first time in their lives they can be themselves and can share their experiences with other students. In this context, they are accepted for who they are (Czajkowska-Kisil and Klimczewska 2007). Through

communication with other deaf people, they develop skills in their natural language, PSL, which in turn functions as a strong integrating factor. They become familiar with the culture of the Deaf, and once they have acquired their mother tongue, they are then in a position to learn a new foreign language, that is to say the language of the hearing majority (*ibid.*).

The issue of identity might have a correlation with the enjoyment of audiovisual accessible services. Indeed, bicultural 'DeaF' people tend to be more willing to use SDH, in addition to SLI, which is provided only in a fraction of television programming in Poland. It is not to say, though, that the provision of SLI should decrease. On the contrary, it continues to play a huge role in the strengthening of Deaf identity and helps to continually raise awareness about human beings' different communication needs.

3.3.1.3 Education

Language is a key element in the education of people, including those with hearing loss. There are many factors that influence a deaf child's linguistic skills. Some of them are the age of onset and language experience. The choice of school, whether a mainstream school or a school for the deaf, also affects progress in mastering a spoken or sign language. According to research (Swanwick and Gregory n.d., Geeslin 2007), children learn another language better and faster when they have been exposed to sign language from the earliest stages of their lives and when they are able to follow bilingual education, that is to say when they are given the opportunity to learn the oral language by using their sign language mother tongue. They have a linguistic basis on which they can build structures typical of another language, a process similar to learning a foreign language. Moreover, deaf and hard-of-hearing students in mainstream schools who use hearing aids or cochlear implants need special attention on the part of the teachers. Studies (Dunn *et al.* 2014, Harris and Terlektsi 2011) show that, as the students at the start of their education do not show many differences with their hearing counterparts, the assumption is that they continue to develop their language skills in the same way and at the same pace. The reality is, though, that these students need

continuous support and focused learning to ensure progress. This is especially evident in secondary schools.

Historically, deaf schools and deaf teachers have played a crucial part in passing on sign language to the next generations of deaf people. Apart from the family heritage, if they were born to deaf parents, it was the only way for the children to acquire language. Given that only 10% of deaf children are born to deaf parents, schools have been the major hub for developing sign language skills, but also for instilling Deaf values and traditions in new students (Ladd 2003). In 1880, at the Milan Congress for teachers for the deaf, it was decided that signing was a primitive substitute for speech and should be resisted. Under the threat of sanctions the students were forbidden to sign and forced to speak (Świdziński 2005). Deaf teachers were removed from schools for the Deaf, thus depriving deaf children of the possibility of learning and speaking sign language, the only means of communication natural to them, for over 100 years. Oralism – the focus in the education of deaf students on the use of oral language by speaking it – became institutionalised (*ibid.*). Such an approach caused a drastic worsening of teaching in deaf schools in all European countries and, as a consequence, a lowering of standards in deaf people's education (*ibid.*). As deaf people cannot be effectively taught a phonic language without having acquired their own native tongue, oralism negatively influenced Deaf children's reading skills, leaving them with a reading age of eight when leaving school, which was not enough to live functionally in an information society. Even now, despite the existence of some bicultural and bilingual education movements, oralism is still a popular teaching approach in many countries round the world (Ladd 2003).

In the mid-1970s, after a century of oralism, this approach to language learning started to be replaced by a teaching method called total communication – a philosophy that promotes the use of any communication method appropriate to a deaf child (*ibid.*). It led to the development of some signed systems, where signs were used together with speech and followed the spoken language order. In Poland, the signed system known as the Polish Signed System was created (see Section 3.3.3 for more details).

As mentioned above, due to the fact that it suppresses a deaf person's natural need to communicate and learn in their first, most accessible to them, sign language, oralism contributed to low levels of education amongst the Deaf, with very few of them attending university in the 20th century. The USA was an exception, as Gallaudet University, which was founded in 1860, offered education for deaf and hard-of-hearing students in sign language, despite the oralist approach that were being advocated everywhere else. In Poland, teachers in most of the schools for the deaf carried on lecturing in Signed Polish (SP). In the 1960s, hybrid systems combining phonic and sign languages started to form and it was in 1964-1965 that professor Bogdan Szczepankowski, from Uniwersytet Kardynała Stefana Wyszyńskiego [Cardinal Stefan Wyszyński University] in Warsaw, came up with a communicative system that was a combination of signing and Polish phonic language grammar. Two decades later, in 1985, the Ministry of Education allowed this system to be introduced into schools for the deaf and a year later the Polish Deaf Association started training teachers to use it. The introduction of SP in schools was considered a success after a period of oralism, which had been in operation since the Second Congress of Educators of Deaf Mutes celebrated in Milan in 1880.

Although SP allowed the deaf to use signing when communicating with hearing people, it prevented them from learning and developing in their natural language, PSL. The situation continues today with most schools in Poland still using SP as the vehicular language in their teaching. The need for bilingual education – the use of sign language in the education of deaf children as the primary means of teaching and, at the same time, access to extra sessions of speech therapy and developing skills in spoken language (Gałkowski 1994) – is now recognised amongst academics in Poland. An experimental project at the University of Wrocław, consisting in the teaching of Polish as a foreign language to a group of deaf students, proved that the use of a bilingual method in the education for the deaf brings better results than the methods currently in use (Kowal 2011). However, in order to benefit fully from bilingual education, deaf students should be taught by teachers who are fluent in PSL and also trained in teaching Polish as a foreign language.

There is a growing trend to educate deaf students in mainstream schools as part of inclusive education. However, some researchers (Czajkowska-Kisil and Klimczewska 2007) argue that Polish mainstream schools are not really designed to offer an appropriate level of education to the deaf due to the lack of specialist training on the part of the teachers. Some of the risky consequences of such a development might be that deaf students end up being isolated in a mainstream school, where they do not have friends who speak their sign language.

All the developments discussed above show that the education system for the deaf in Poland needs to improve in schools for the deaf, where many teachers do not know PSL, as well as in mainstream inclusive schools, where deaf students might be subject to unintended social exclusion, in order to provide students with optimal conditions in which to develop their natural language – PSL –, and make progress in spoken Polish. Understanding the way in which deaf students are taught Polish (especially reading skills) is bound to be a very valuable asset to SDH subtitlers, who can then use this knowledge in the production and delivery of a quality service for their audiences.

3.3.2 Target audiences

The deaf population is extremely varied. There are a few factors that affect the heterogeneity of the deaf:

- The age of the onset of deafness, depending on whether it is congenital, pre-lingual (<3 years), or post-lingual. Children with a congenital or pre-lingual onset of deafness tend to use sign language as their main means of communication. They might also be immersed in the Deaf community earlier. However, and especially if they are born to hearing parents, their language exposure might be delayed. They might also be the ones who are considered for cochlear implantation sooner.
- Age at diagnosis. In the UK, neonatal screening for hearing loss has been implemented since 2006. In Poland, a public benefit organisation, Wielka Orkiestra Świątecznej Pomocy [Great Orchestra of Christmas

Charity], collected money for, and implemented, a nationwide Universal Newborn Hearing Screening Program in 2002. The foundation introduced hearing tests, provided the equipment, trained the personnel and created centres to which children whose tests showed signs of hearing loss can be referred (WOŚP 2016). Neonatal screenings for hearing loss take place within a few days of a child's birth and allow for immediate intervention services in order to provide him or her and the parents with appropriate support.

- Language experience (deaf or hearing parents, choice of communication, schooling etc.). This correlates with the other factors. The hearing status of the parents has considerable impact on the deaf child's use of language. Deaf parents are an immediate source of sign language the child starts to acquire. In hearing families the situation might be more complicated. However quick and appropriate the intervention, there is always a delay in language exposure, which might influence the child's future linguistic skills. Communication tools, such as hearing aids or cochlear implants, as well as the use of signing should accord with the child's needs and with the right kind of ongoing support. School placement is one of the most difficult decisions parents must take, as it will be one of the children's main environments, enabling them to grow and learn, shape their own identity and develop affective relationships with their peers.

There are many factors influencing the variations that can be found in the makeup of the deaf population. However, the recipients of accessible audiovisual services also include hard-of-hearing people. The usual aspects – both physiological and cultural – that are taken into consideration when classifying target viewers for the creation of subtitles for deaf and hard-of-hearing (SDH) are:

- the level of deafness (deaf, hard-of-hearing, deafened)
- the age of the intended audience (children or adults)
- the language used (sign or spoken language)
- the level of linguistic skill (learners vs. proficient users)

Of course, there can be many overlaps and permutations between the groups, for example a deaf adult can be a learner of the oral language or a professional user / reader of such a language. In order to be successful in their task, when preparing an SDH file, subtitlers should know as much as possible about the peculiarities and idiosyncrasies of the target audience of a particular programme. Some stakeholders in the industry believe that complications surface when only one file is prepared to cater for a 'homogeneous' group of target viewers that is in essence diverse and has different communicative needs. The classic example is the name of the service itself – subtitling for the deaf and the hard-of-hearing, which are two very different groups with conceivably different needs and expectations as far as subtitles are concerned, for example with regard to the editing applied in subtitles or the use of descriptive labels. Due to many significant differences between deaf and hard-of-hearing viewers, it is very challenging, if not impossible, to satisfy both audiences with a single set of subtitles.

From a cultural perspective, most Deaf people primarily use sign language in their everyday communication. Even though they may read very well, their preference tends to be to produce and receive information in sign language. For the sake of comparison, we can think of a hearing person watching a foreign film supported by subtitles in a foreign language, for example a Polish person living in the UK and watching an English film with English subtitles. However familiar the viewer is with the foreign language in question, it is not essentially his or her mother tongue. Some deaf people are educated in mainstream schools, and are, therefore, strongly rooted in a spoken language environment. They may meet and interact with other deaf people only later in their lives, for example in deaf clubs. They might want to learn sign language, but it will initially be the phonic language that they will feel most comfortable using. They would generally opt for close-to-verbatim subtitling. And yet another group might be formed by the Deaf who want to access subtitled programmes, perhaps due to the fact that there are many more than programmes with SLI, but they might be slower readers because they are accustomed to using sign language as their primary means of communication. They would require subtitles that are edited and have slower presentation rates. In order to help them bridge the gap

between sign and spoken language in reading, subtitling that takes into account the features of signing could, in principle, be a viable option.

In Spain, researchers have tried to include some characteristics of Spanish Sign Language (SSL) into the formulation of SDH. They have analysed some of the rules shared between SSL and spoken Spanish and have tried to incorporate them into SDH, so that the subtitles would be more readily understood by native users of SSL (Pereira 2010). The researchers involved in this project have attempted to reflect the syntactical and lexical features of SSL in subtitles by following the chronological order of events and presenting information from the most general to the most specific; they have also tried to maintain a subject-verb-object structure and to indicate space and time at the beginning of the sentence. At the lexical level, they have suggested using more popular synonyms or using an adjective in place of an abstract noun for instance (*ibid.*). This kind of research shows how subtitles can be adapted to suit the needs of deaf people.

In the case of hard-of-hearing audiences, oral language is their principal means of communication. As mentioned earlier on, as reading is rarely a problem for them, they prefer verbatim (or close-to-verbatim) subtitles (Szarkowska and Laskowska 2014). They claim that, even if they are not able to follow fast subtitling, they should be the ones to decide what information to omit. This is not feasible, however, as what information can be edited out due to the space and time constraints of the modality depends on subtitlers only. It is therefore essential that subtitlers are well trained in the needs and expectations of their viewers, so that they can make appropriate decisions in terms of their understanding and their degree of comfort when watching subtitled programmes.

Standard SDH is often too complicated and / or too fast for children with hearing problems (Mliczak 2015 on the basis of personal communication with teachers from the Institute of the Deaf in Warsaw). When they learn to read in a foreign language (if their first language is sign language), they may struggle with close-to-verbatim subtitles. Even if their reading skills match those of their hearing

counterparts, they may not have the ability to keep up with the moving images or follow the plot of an audiovisual programme whilst reading a dynamic text that only remains onscreen for a few seconds. This group of SDH users naturally prefer to opt for subtitles that are adapted to their language skills and have lower presentation rates.

This last category includes learners versus professional users of spoken languages. Learners do not only include children, but also teenagers or adult deaf viewers, who, for some reason, decide to develop their skills in an oral language, especially through reading. The group might also include people who decide to have a cochlear implant later in their lives. Audiences belonging to this group could benefit from adapted subtitles. The practice of providing subtitles for learners is very rare, and is often limited to subtitles for learners of foreign languages. SDH-supported materials for learners of spoken languages are provided through specific projects. One example is the cooperation between AVTLab (Audioviual Translation Research Lab) researchers-subtitlers and teachers of Polish from the Institute for the Deaf [Instytut Głuchoniemych] in Warsaw. In short, the project concentrates on familiarising deaf students with the content of compulsory reading books – that is to say books that need to be analysed during a given school year according to the national curriculum – through the subtitled film adaptations of selected books (Mliczak 2015). Another initiative has been undertaken by the foundation, Katarynka, which set up a project, Adapter (www.adapter.pl), which is the first in world cinema on the internet created especially for deaf and blind viewers, who can access films with AD, SDH or sign language. Some films are supported by more than one accessibility service. The foundation's recent project, Adapter w Szkole [Adapter at School], focuses on education and especially on making films available to deaf and hard-of-hearing students. There are films supported by standard SDH, but also some with edited or simplified SDH for those who might benefit from this type of accessibility service.

All of the considerations noted above should be taken into account when preparing SDH. It is not possible to satisfy the expectations of all the groups concerned through a single set of subtitles, which is now an established

practice all over the world. However, due to more awareness concerning the significantly different needs of deaf and hard-of-hearing viewers, projects such as ‘Adapter at School’ and small scale cooperation initiatives between associations, professional bodies and schools might result in the production of a higher number of SDH types more suited to different audiences.

3.3.3 Language considerations

The current section aims to shed light on the importance of language use by people affected by hearing loss, with a special focus on deaf users of sign language. The first part concentrates on the features of sign language as a natural language as opposed to other visual systems of communication. Next, the situation regarding Polish Sign Language (PSL) is explored in more detail, and followed by the challenges faced by deaf children learning to read.

3.3.3.1 Sign Language as the natural language of the Deaf

Sign languages have often been viewed as systems of gestures or pantomime (Sutton-Spence and Woll 1999). However, Hockett (1960) defines what distinguishes languages from any other systems of communication through a set of 13 characteristics, as shown in Figure 7 below.

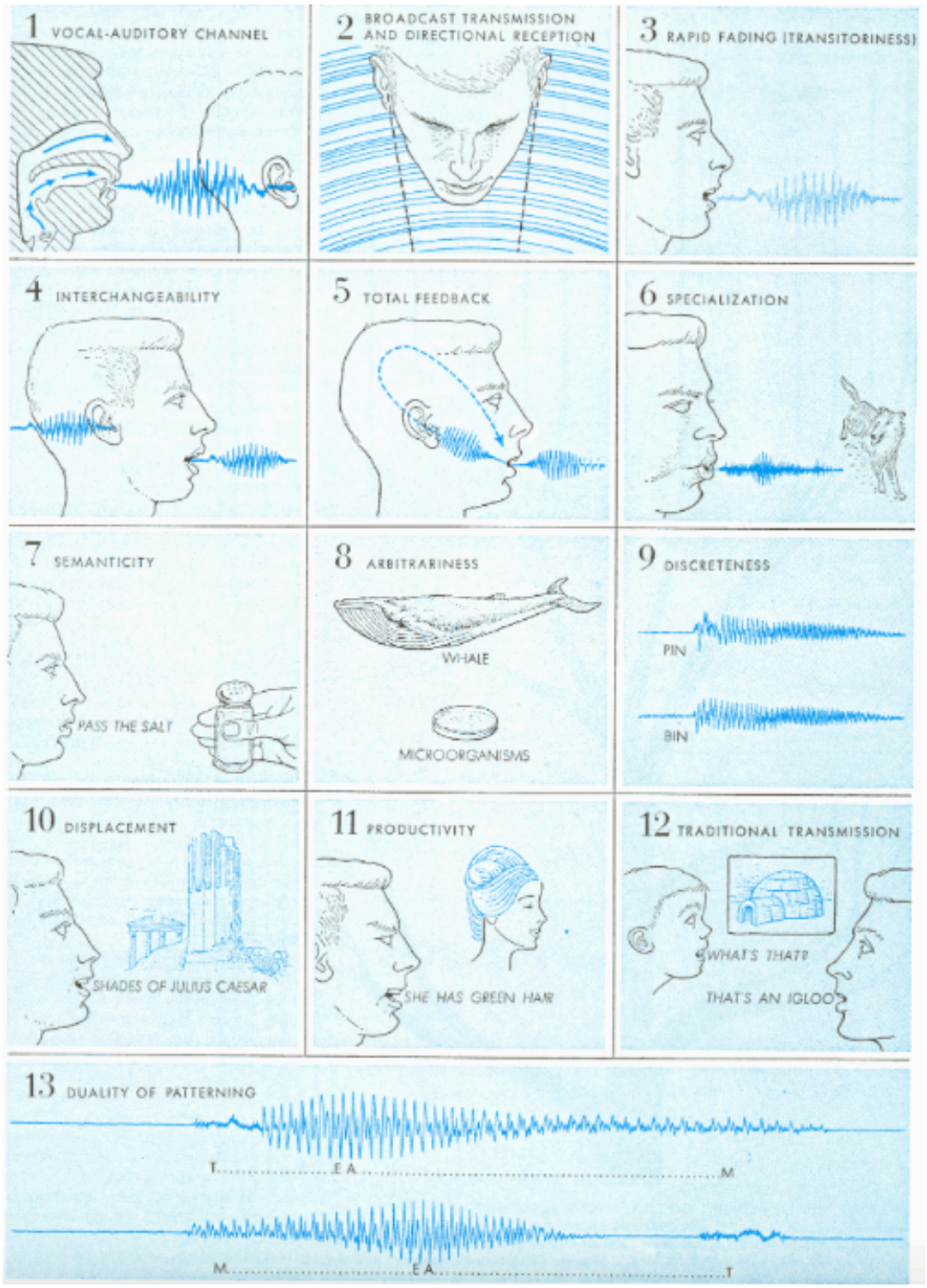


Figure 7: Features of human languages (Hockett 1960: 7)

When analysing them in relation to sign languages, it turns out that they possess all the features, apart from the first – the vocal-auditory channel. Whereas most human languages use the vocal-auditory channel, sign languages rely on the corporal-visual channel (Sutton-Spence and Woll 1999). Apart from this, just like any other spoken language, sign languages have

grammatical, semantic and phonological systems as well as rules for connecting them (Kyle and Woll 1985).

We should stress here that any other forms of visual communication used in education or in contact with hearing people, such as cued speech, Signed English or Signed Polish, Paget-Gorman sign system (PGSS)[6], or sign supported English (SSE), are not natural languages. They have been created to bridge a gap in communication between the deaf and the hearing by reflecting spoken language with the use of signs but, in essence, they are completely artificial (Kyle and Woll 1985). Sign languages, on the other hand, emerge naturally in communities of deaf people, and even if they have a limited number of signs, the users are able to communicate an unlimited number of messages.

Stokoe was one of the pioneering linguists who, in the 1960s, wrote about American Sign Language as a natural, "sophisticated language, with a grammar and syntax distinct from spoken languages" (Gallaudet Research Institute 1984: 3). His two books, *An Outline of the Visual Communication Systems of the American Deaf*, from 1960 and *A Dictionary of American Sign Language on Linguistic Principles*, from 1965, marked a milestone in the field, as they offered a breakthrough in the study of sign languages. His research put sign languages in a different light, giving them more prominence and recognition as natural languages. It also contributed to promoting and raising the visibility of bilingual education for the deaf (*ibid.*). Another important result of his work was his novel approach to looking at language from a different perspective, excluding low level auditory processing and focusing on linguistic processing. Sign languages can thus be studied regardless of modality.

3.3.3.2 Polish Sign Language status

As noted by Czajkowska-Kisil (2006), there are still many misconceptions revolving round Polish Sign Language (PSL), such as the belief that it is only a

[6] A grammatical sign system that reflects patterns of spoken English, with each word having its own sign and all the signs presented in the same sequence as words in an English sentence (PagetGorman n.d.: online).

set of gestures without any grammatical cohesion, that it is merely a signed version of the Polish phonic language, or that it is not elaborate enough to express complex concepts. The lack of a written representation of PSL further adds to the poor knowledge that the general public has about sign languages. Only relatively recently have scholars in countries like the UK, Australia, Germany and the Netherlands started to collect corpora that can be of help in analysing the structure of sign languages (DCAL 2012). In Poland, a team from the University of Warsaw and the Institute of Polish Sign Language started working on a project that involves the compilation of a PSL corpus back in 2010 (Bezubik 2011). As part of this project, they visually record conversations in PSL and analyse them using specialised software to describe and translate them into phonic Polish, so that linguists who do not know PSL can benefit from the corpus. This dictionary, which investigates the linguistics of sign languages across the world, constitutes pioneering research on a national scale.

Moves to change and alter the nature of sign languages exist in most countries and are instigated for different reasons. Some of the reasons for devising systems to teach deaf people are discussed by Sutton-Spence and Woll (1999: 37), in the following terms:

> One of the causes of change in sign languages has been language planning. Ever since public education of deaf people has existed, hearing people have attempted to alter the language used by deaf people. Even the great sign language enthusiasts of the eighteenth and nineteenth centuries, such as the Abbé de l'Epée in France, and Thomas and Edward Gallaudet in America, tried to alter the 'natural signs' of the deaf children they taught, to match the structure of the spoken language of the country. […] Unfortunately for the language planners, the changes have not been as great as they would have liked. Hearing people often try to invent new signs or sign systems for deaf people […] but these have never been totally accepted.

In the case of Poland, there are various forms of communicating with the deaf apart from Polish Sign Language (PSL), such as Signed Polish (SP) and Pidgin Sign Polish (PSP). Polish Sign Language is the natural visual-spatial language of the Polish Deaf community. Unlike the other forms of communicating with the

deaf, it is characterised by its own grammar in the form of facial expressions, body posture and pantomime (Section for Sign Linguistics n.d.: online). It is believed that PSL started to develop informally among the students of the Institute for the Deaf, which was founded in Warsaw in 1817 by Rev. Jakub Falkowski (Tomaszewski and Czajkowska-Kisil 2006). This is when the first observations of the language used by the deaf were made. They resulted in the publishing in 1879 of *Słownik mimiczny dla głuchoniemych i osób z nimi styczność mających* [*The Mimic Dictionary for the Deaf-mute and People Communicating with Them*] (*ibid.*). However, at the time, the world trend with regard to teaching the deaf how to speak the phonic language of their respective countries impeded any detailed studies of PSL and created assumptions about sign languages as being purely visual codes for spoken languages (Armstrong 2000).

In Poland, as already mentioned, an alternative to the purely oral method in place in most schools at that time was the use of Signed Polish, which was introduced by Bogdan Szczepankowski in the 1960s in an attempt to enable deaf children to learn the Polish phonic language (Świdziński and Gałkowski 2003). SP is based on standard Polish language grammar and lexical items from Polish Sign Language. In a linear way, it combines signs into sentences according to the grammatical rules of spoken Polish and, whenever necessary, prefixes and suffixes are fingerspelt. There are two versions of the system: the full version called *pełny wariant systemu językowo-migowego* [full version of the signed system], which reflects the Polish language in terms of its use of inflected endings, and the basic one, which is called *wariant użytkowy systemu językowo-migowego* [usable version of the signed system], in which spoken text is presented by signs without endings, and is also known as the functional version (*ibid.*).

Another system used in communication with the deaf is Pidgin Sign Polish. It includes elements of both PSL and Polish phonic language but, crucially, also includes simplified language forms that do not exist in either, and deviates from the grammatical structures of both languages. It is used in schools and in

conversations with hearing people who have a limited knowledge of the Deaf community and their language (*ibid.*).

Even though all the above-mentioned systems can be used in different contexts for different purposes, it should be noted that it is only PSL that is the mother tongue of the Deaf. Its users constitute the Polish Deaf minority living within the boundaries of Poland, and even though PSL may reflect some influences from Polish phonic language, it is clearly distinct in terms of its grammar and lexicon.

3.3.3.3 Language and reading challenges of deaf children

Language acquisition and learning to read are naturally interrelated. However, as far as sign language users are concerned, reading texts happens in a different language – the phonic language of the country they live in. The present section examines deaf children's language development and the resulting reading challenges when they are confronted with the phonic language of the country in which they reside.

When discussing the language of deaf children, two periods of hearing loss can be identified: pre-lingual and post-lingual. In pre-lingual deaf children, their loss of hearing takes place before they acquire spoken language and in post-lingual deaf people, hearing loss happens after they have mastered the use of the spoken language. This impacts on the further development of a deaf person's language.

As regards pre-lingual deaf children, the first issue is the analysis of the child's language development. Deaf children from hearing families are exposed to sign language later and have less opportunity to practise and there is more influence from spoken language, whereas deaf children raised in deaf families and, therefore, exposed to sign language from the beginning of their lives, develop their language skills in a comparable way to their hearing counterparts, with the same errors and generalisations. For instance, children start to babble or 'mabble' (meaning babbling in the manual mode, using their hands) at six months of age (Petitto and Marentette 1991), form their first words at around 12

months and start signing at around 10 months. Their vocabulary suddenly increases and starts to include two sign combinations (comparable to combining two words by hearing children) at around 18 months (Woll 1998). By the age of three, deaf children have mastered about 500 signs (Morgan *et al.* 2008). Grammar develops from the age of two to three years of age (*ibid.*). Errors are usually linked to handshape, then movement and location (*ibid.*), which constitute parts of sign language phonology. Examples of deaf children developing morphology in sign language include signing verbs and adding facial expressions. At first, children use word order without inflections (Newport and Meier 1985). Some verbs are not inflected by children until they are over three years of age. More complex morphology develops after five years. Even though iconicity has been shown to facilitate second language learning (Morgan *et al.* 2002), there is no evidence that it helps sign language acquisition (Morgan *et al.* 2006). In relation to the amount of language a child is exposed to, research (Galloway and Woll 1994) shows that deaf parents use less language, ask fewer questions, but concentrate on naming and single signs. However, less language does not mean less benefit to the deaf child. Deaf children concentrate on eye contact and attention skills instead.

Narrative development has a huge impact on children's language acquisition. When they learn about the structure of a story, a child learns how to retell events, which later leads to better literacy. This is a strong predictor of social-emotional, cognitive, academic and language development (McCabe and Peterson 1990). It also influences a child's 'readiness' to start school. Deaf children of hearing parents develop their narrative skills in a much slower manner in general. They show reduced comprehension and use of morphology by being exposed to sign language later in their lives (Newport 1990, Galvan 1989). To sum up, the late development of any language, be it signed or spoken, leads to a delayed knowledge of the world and a lesser degree of proficiency in any language (Mason and Herman 2015).

When analysing the reading levels of deaf children from a historical perspective, US research conducted in the 1970s showed that 18 year olds had a mean reading age of nine years (Di Francesca 1972). Similarly, a UK study published

by Conrad (1979) demonstrated that the mean reading age of deaf school leavers was also 9 years. According to more up to date research, only 4% of Dutch deaf children participating in a study conducted by Wauters *et al.* (2006) were reading at the expected level. Powers (1999) confirms that in the UK there was no significant improvement in the reading levels of deaf children over the next two decades, the 1980s and 1990s, though it can be argued that there was a lack of large-scale studies exploring the situation. In order to pinpoint the challenges encountered by deaf children when reading the phonic language, the factors influencing their reading development should be take into account. Evidence from longitudinal studies (Muter *at al.* 2004, National Institute for Literacy 2008, Bowyer-Crane *at al.* 2008, Lervag and Hulme 2009) shows that three main factors influence the development of word reading skills in hearing children: phonological awareness, letter sound knowledge and rapid automised naming (RAN)[7]. As far as deaf children are concerned, there are conflicting findings as regards factors influencing word recognition. This is due to the fact that the tasks used in the tests were designed for hearing children.

Reading comprehension is about decoding and language understanding (Gough and Tunmer 1986). There are studies confirming the importance that non-phonological oral language skills such as vocabulary knowledge, grammar knowledge and listening comprehension have in reading comprehension development (Nation *et al.* 2010, Clarke *et al.* 2010, Fricke *et al.* 2013). Like hearing readers, deaf children are better at reading when they have a strong linguistic foundation (Mayberry *at al.* 2011). Studies also show that deaf children of deaf parents score better at reading tests than deaf children of hearing parents (Mayberry 1989, Mayberry *at al.* 2011), and competence at reading the phonic language is strongly related to the knowledge of sign language (Strong and Prinz 1997, Padden and Ramsey 1998). However, even though a solid foundation of the first language is a necessity in the development of reading comprehension skills, it does not seem to be sufficient for reading in a second language (Lederberg *et al.* 2013). The early identification of deafness results in

[7] The ability to name known (seen on a page) letters, numbers, symbols, phonemes, objects, etc. quickly and aloud. It is about retrieving information without effort.

earlier intervention, which in turn is associated with improved language skills for deaf children (Pimperton and Kennedy 2012). Moreover, children whose deafness is identified early outperform those who are identified later as regards their reading comprehension skills in primary school (McCann *et al.* 2009). The same applies to children who are implanted early. They present better speech and language (Svirsky *et al.* 2004) as well as reading outcomes (Archbold *et al.* 2008). Despite these positive findings, though, early implantation benefits wear off with age, and by the time they are 12-16 years of age, early implanted children do not score better in reading and, according to some findings, are outperformed by their counterparts who wear hearing aids (Harris and Terlektski 2011).

Regarding intervention in reading for hearing children, "it is clear from well-controlled randomized trials that teaching that involves letter-sound knowledge and phonemic awareness training can bring about statistically reliable improvements in word reading skills with moderate effect sizes" (Hulme and Snowling 2015: 6-7). Mayer and Trezek (2014: 366) recommend that the instruction for deaf children's reading intervention and assessment be "differentiated rather than different", as well as being based on the strengths of a particular student. This would mean using visual information to support the acquisition of letter-sound knowledge and phonemic awareness in the form of speechreading, cued speech and visual phonics. Speechreading – a technique that entails visually interpreting the movements of the lips and the face – is a long-term predictor of reading (Kyle and Harris 2010, 2011). Cued speech – making phonemes visible through lip patterns and handshapes – has been proven to have a beneficial effect on deaf children's phonological and reading skills (LaSasso *et al.* 2010). Lastly, visual phonics – a technique using fingerspelling handshapes and movements to represent phonemes – has helped in phonics, though not necessarily in other areas of reading (Tucci *et al.* 2014). Some other strategies have also been developed to help deaf children improve their early reading skills. However, further research should be carried out in order to show how beneficial these can be and for whom they are mostly suitable (Pimperton 2015). One certain thing is the fact that functional language is the ultimate foundation and key element in developing reading skills.

3.3.4 SDH practice in Poland

The following parts of this chapter focus on the analysis of Polish SDH as it is practised on various platforms such as TV, DVD, theatre and the internet, as well as live events. The overview of programmes supported by SDH and, when possible, the percentages are presented and analysed against the legal requirements for the provision of accessible services. SDH on television is explored in most detail, as this is the main focal point of the thesis. However, it is the overall picture of SDH in Poland that truly shows how the service has developed over the years and in what direction it is heading.

3.3.4.1 TV

As mentioned below (see Chapter 4), TVP is the station that first introduced SDH on Polish television back in January 1994. Since March 2011, private stations have also been required by law (Article 18a) to provide a percentage of accessible programmes to people with sensory impairments, including the deaf and the hard-of-hearing. However, as I have explained in more detail in the following parts of this section, all the opinions of the National Broadcasting Council, broadcasters and viewers show that the act leaves a lot of room for improvement. The newest amendment to Article 18a was passed in 2018 and is elaborated on further in Chapter 4. The following sections discuss the state of affairs from the implementation of Article 18a in 2011.

A few months after this amendment was passed, the National Broadcasting Council collected reports from all the stations in order to ascertain the number of hours and programmes that were being broadcast with accessible services. During the conference on “The role of television in breaking down barriers”, which took place in Warsaw on 26 March 2012, TVP was shown to be in the lead with 15% of their programmes being subtitled. The two largest private stations followed with 10% (Polsat) and 4.1% (TVN). Research also reveals that some stations failed to understand the meaning of SDH, and one of them even included text-based display (sometimes called a ‘crawler’ or ‘news ticker’) at the

bottom of the screen as part of their assisted services in order to boost their accessible output.

On 5 June 2013, following public consultations led by the National Broadcasting Council, a group of six broadcasters with the biggest shares in the television market (Polsat, TVN, PULS, TV4, ATM SA, Stavka), as well as the public service broadcaster TVP, signed an agreement in which they stated that they understood the main concepts of Article 18a of the Amendment to the National Broadcasting Council Act in 2011 (KRRiT 2013), which had previously been misinterpreted by some broadcasters. The seven broadcasters agreed on the following:

- The **definitions of accessible services**, including SDH, Sign Language Interpreting and Audio Description. According to the agreement, SDH would be understood as Polish subtitles textually representing dialogue exchanges and narrations and synchronised with visuals. They were to include descriptions of character identification and sound effects, and there would also be live subtitles and Polish subtitles for foreign programmes that fell under the remit of SDH.
- The **quantity of accessible services**. All the services should amount to 10% of accessible services, which means that the amount of SDH may vary depending on the provision of AD and SLI.[8] The flexibility between the types of accessible services was explained by the different nature of the programmes; talk shows, for example, should not be audio described and programmes for young children should have PSL interpreting, etc.
- The **visibility of accessible services**. Broadcasters also agreed, whenever possible, to identify programmes supported with SDH, AD or SLI clearly on teletext pages, television station websites, in the announcements advertising a particular programme and in the descriptions of the programmes included in the electronic programme guide (EPG), as well as in printed magazines.

[8] It was agreed that SLI should be delivered in the form of PSL or PSS, with the note of using only PSL in programmes for children.

The agreement was up for review in the middle of 2014, but it was not until June 2015 that the National Broadcasting Council issued a review of the accessible services offered on the major TV stations in Poland. The percentages, shown in Figure 8 below, illustrate how many SDH programmes were delivered by a particular station in the third and fourth quarters of 2013 and the first and second quarters of 2014.

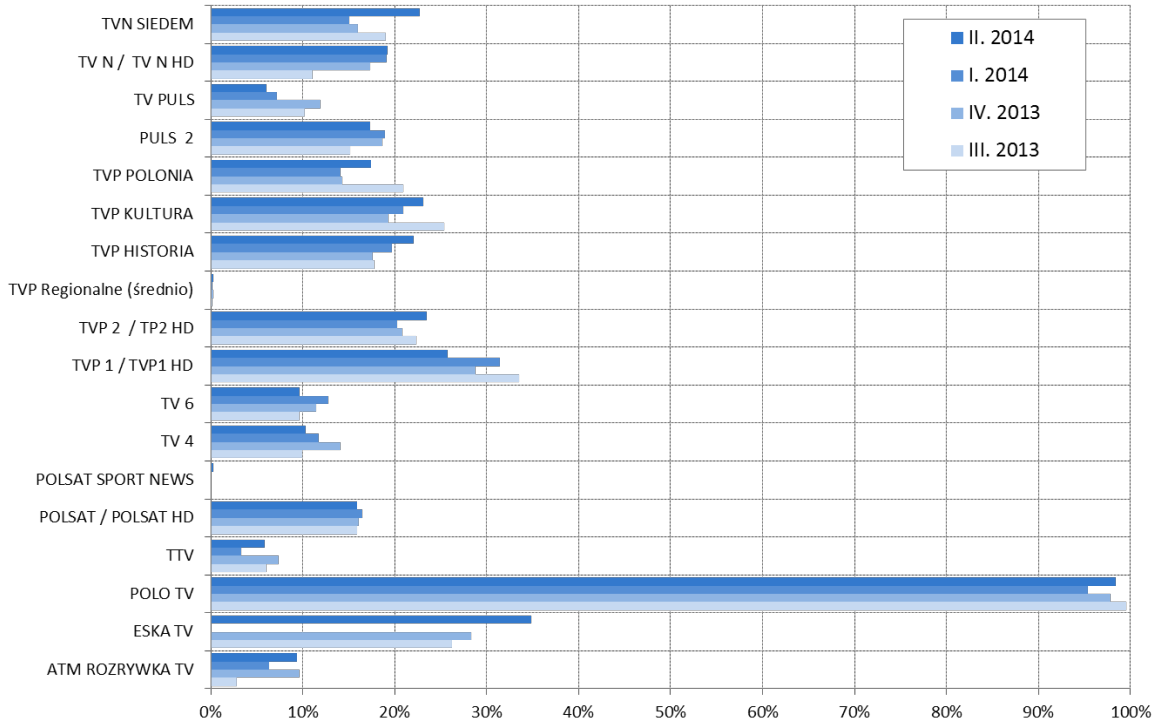


Figure 8: Subtitling on Polish television (Okoń 2015)

As shown above, Polo TV, a music station belonging to Polsat, had the highest percentage of subtitles delivered between mid-2013 and mid-2014. This might have been due to the repetitions of the programmes. TVP follows with around 30% of SDH. Since the beginnings of SDH TVP has maintained a strong position in the provision of accessible services for its deaf and hard-of-hearing viewers. In 2016, TVP reported that it had delivered 4,500 programmes with SDH on TVP1 and TVP2 in 2015, which amounted to 37% of all the programmes broadcast on TVP1 and 28% of all the programmes aired on TVP2. These two channels were showing an average of 12 hours of programmes with SDH daily (TVP 2016).

To put Poland into perspective with the rest of countries of the European Union, Figure 9 below presents data covering the provision of subtitling on broadcast television in the various member countries, during the years 2011 and 2013:

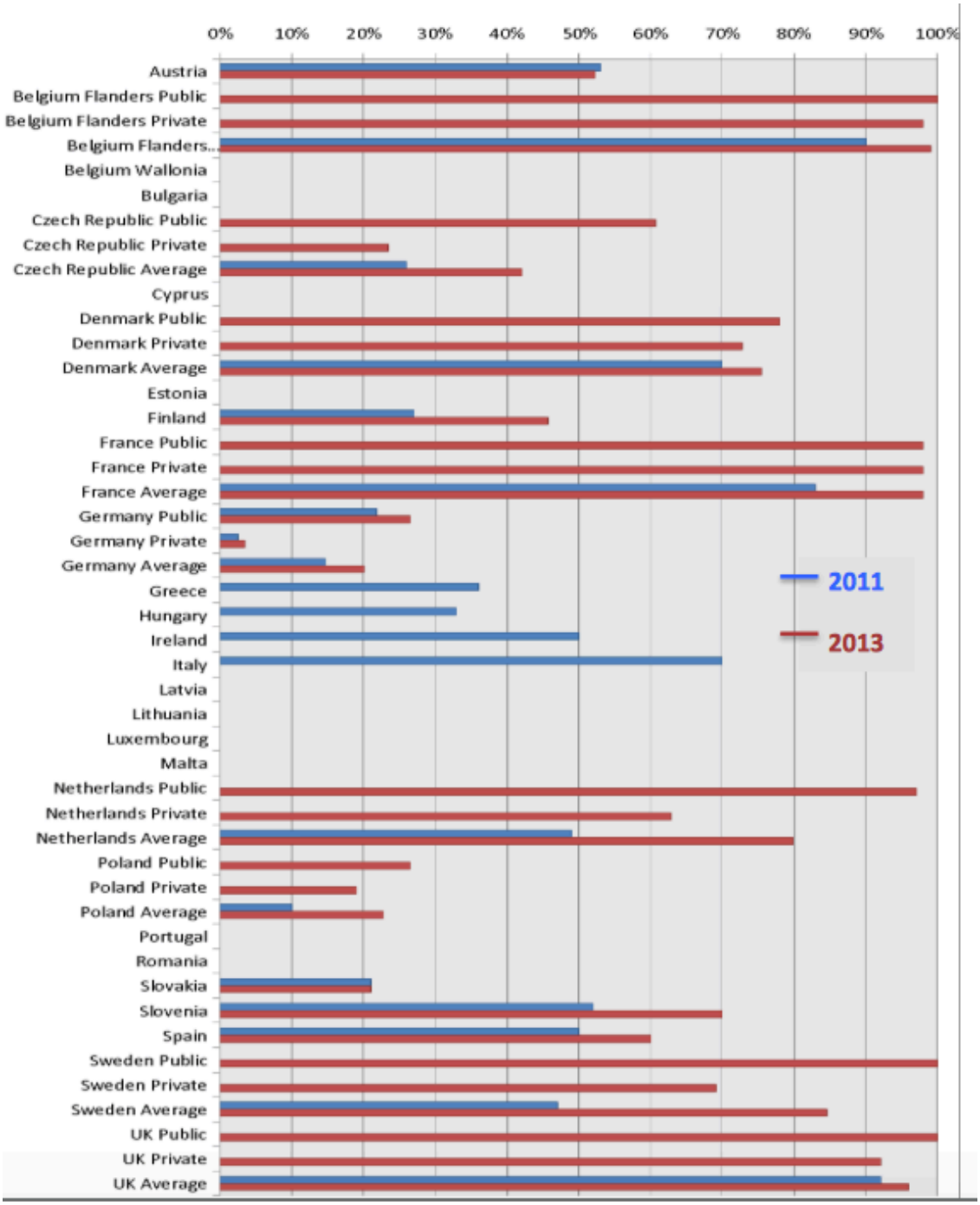


Figure 9: Subtitling provision for broadcast television in the EU (EFHOH 2015: 15)

As we can see, Poland improved significantly between 2011, when the provision of accessible services became law and stood at around 10% of the

programming, and 2013, when over 20% of the programmes were being delivered with SDH.

Following a series of public consultations that took place between November and December 2015, the National Broadcasting Council issued a set of recommendations in February 2016 aimed at regulating the quality and procedures of delivery of SDH in audiovisual programmes (KRRiT 2016). The report starts by listing the requisites of the legal regulations and is followed by the broadcasters' 2013 agreement to provide the background of the accessibility services on television. Next, it refers to the actual delivery of SDH on television stations. Quarterly reports from the television broadcasters show that SDH is the access service that scores the highest percentages in terms of programmes that are broadcast with this type of provision. The example given in the report shows data for the third quarter of 2015, stating that in programmes broadcast via terrestrial digital television the practice of SDH vacillated between 5.5% (one of the commercial sports channels) and 36.5% (Channel 1 of TVP) of the channel's output.[9] These percentages exclude adverts and telesales (*ibid.*). The subsequent points contained in the recommendation specify the aim to provide SDH and also offer a description of the different groups of viewers that use SDH services. A significant part of the recommendation is devoted to spelling out the basic rules behind the creation of SDH. As this was the first such document ever to be issued by the Council, it can therefore be understood as an official set of guidelines aimed at regulating the provision of SDH in Poland.

The standards briefly comment on the following aspects:

- The selection of information to be subtitled (including speech but also sound effects as well as para- and extralinguistic features, especially those that cannot be deduced from the visuals).

[9] The National Broadcasting Council does not publish the results of their monitoring of the accessibility services offered by television broadcasters (e-mail communication with Murawska-Najmiec 2014). The example given in these pages is the same one that is quoted in the report, without reference to the actual document.

- The readability of the subtitles.
    - Visibility, or legibility, in terms of a clear presentation of the subtitles against a darker background. It also offers advice on the features that help make the message contained in the subtitles clearer, namely character identification and the representation of sound effects on screen. It is recommended that the various characters in a given programme are identified either by using labels with their names or a palette of colours including white, yellow, cyan, green and, when necessary, magenta, but with the explicit exclusion of red. Capital letters and/or brackets can be used to indicate para- and extralinguistic information, sound effects and music. It is important that the employment of such features is coherent and systematic throughout the whole programme.
    - Placement of the subtitles and synchrony with the visuals. Whenever possible, scene and shot changes should be taken into account when spotting the subtitles. Subtitles should consist of a maximum of two lines and, in exceptional circumstances they can consist of up to three, though these exceptional circumstances are not listed. It is important not to cover burnt-in captions or characters' mouths with the subtitles.
- Subtitle exposure time should be correlated to subtitle reading speed and, at the same time, be synchronised with the visuals. It is recommended that the display rate of the subtitles be a maximum of 12 cps, with the proviso that, in the case of children, the exposure time should be longer. The display rate, however, is not specified for programmes aimed at younger audiences. It is mentioned, though, that the text of subtitles for children under 11 years of age should be reduced and the vocabulary simplified.
- The communicative nature of the subtitles is emphasised. Here, the message conveyed appears to be a bit confusing as, on one hand, it is recommended that the subtitles are made up of understandable, simple sentences, avoiding elaborate and sophisticated vocabulary, while, on the other hand, advice is given that they should not be censored, nor

excessively shortened. As for the division of lines, subtitles should form a semantic whole and should be grammatically correct.

- Respecting the style and rhythm of the characters' dialogue. If it is difficult to keep certain linguistic elements, such as the use of archaic language, the subtitlers should come up with a strategy to signal the presence of non-standard speech.

All the above recommendations offer a good starting point from which to understand the essence of SDH and how it should be prepared. However, as Okoń (2015) – a member from the department of monitoring in the National Broadcasting Council – states certain broadcasters quickly learn how to fulfil their obligatory duties without necessarily meeting the needs of the target audiences, for instance by delivering SDH or other accessibility services at night, by limiting the creation of subtitles to programmes with minimal sound effects or the production of AD scripts for talk shows. This is one of the reasons why certain formal regulations need to be applied in order to ensure that viewers with sensory impairments are being offered adequate accessible services. Even nowadays, and despite the existence of guidelines, deviations from them can often be observed on television, as is reflected in the following instances.

One of the examples presented in Figure 10 comes from the television station, Polsat, in which different colours are employed to identify characters, including red, which is listed by the National Broadcasting Council as one of the colours not to be used:

Figure 10: Subtitles in red on Polsat

Other colours, apart from yellow, cyan and green, can also be observed on TVN (Figure 11 and Figure 12), even though they are not recommended by the National Broadcasting Council:

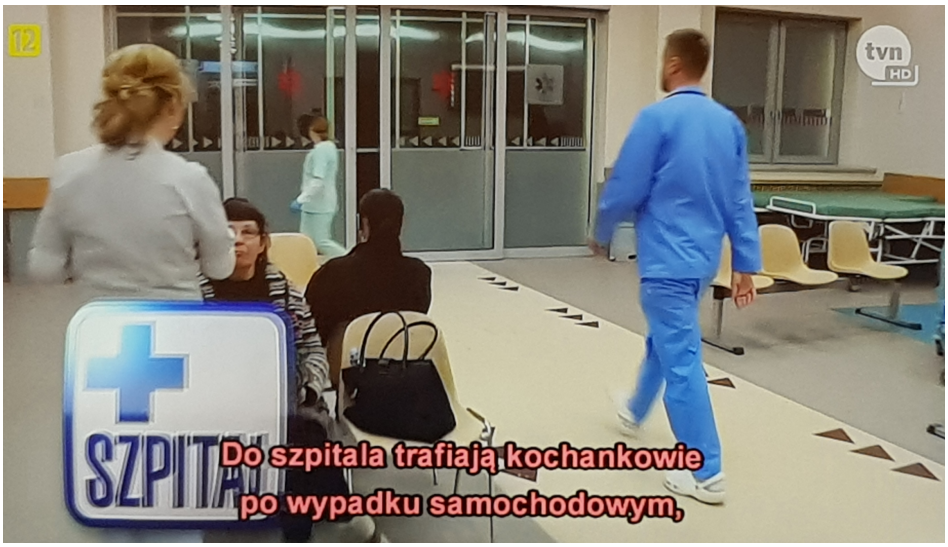


Figure 11: Subtitles in light red on TVN

Figure 12: Subtitles in yellow and purple on TVN

The legibility of some subtitles is also often compromised by a lack of contrast between the text and the background (see Figure 13), or because the subtitles fall on top of in-built captions (Figure 14):

Figure 13: Poor visibility of subtitles on TVP

Figure 14: Subtitles covering in-built captions on TVN

Another issue is a distinct lack of consistency across different TV stations. Even though this is not specifically stated in the Council's recommendations, it can be argued that adopting the same approach on different television stations would positively contribute to a more systematised and coherent provision of SDH in Poland. The examples below show that, when two characters with different allocated colours speak in one subtitle, on some TV stations the two lines of the subtitle are preceded by a dialogue dash (Figure 15), whereas on other channels they are not (Figure 16), presumably because the use of different colours should be sufficient for viewers to distinguish the speakers:

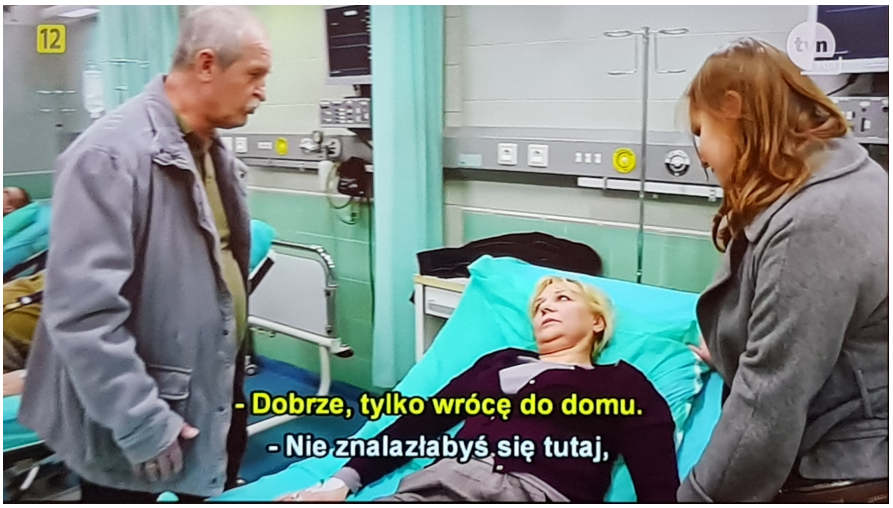


Figure 15: Use of dialogue dashes on TVN

Figure 16: Lack of dialogue dashes on TVP

Although SDH on Polish television still has a long way to go in terms of the observed quality standards, it is good to see that efforts to regulate the provision of accessible services on the part of the National Broadcasting Council offer on-going support not only in the shape of consultations and recommendations, but also as an entity in charge of monitoring such provision. In July 2018, the Council developed an application that allows viewers to keep an eye on which programmes from which stations are broadcast with SHD, PSL or AD.

When it comes to providing this type of information on the individual stations' websites, some of them clearly mark the programmes with SDH ('N' for 'napisy' [subtitles]), PSL ('JM' for 'język migowy' [sign language]) or AD, whereas others still do not do it, as illustrated in Figure 17, Figure 18 and Figure 19 below:

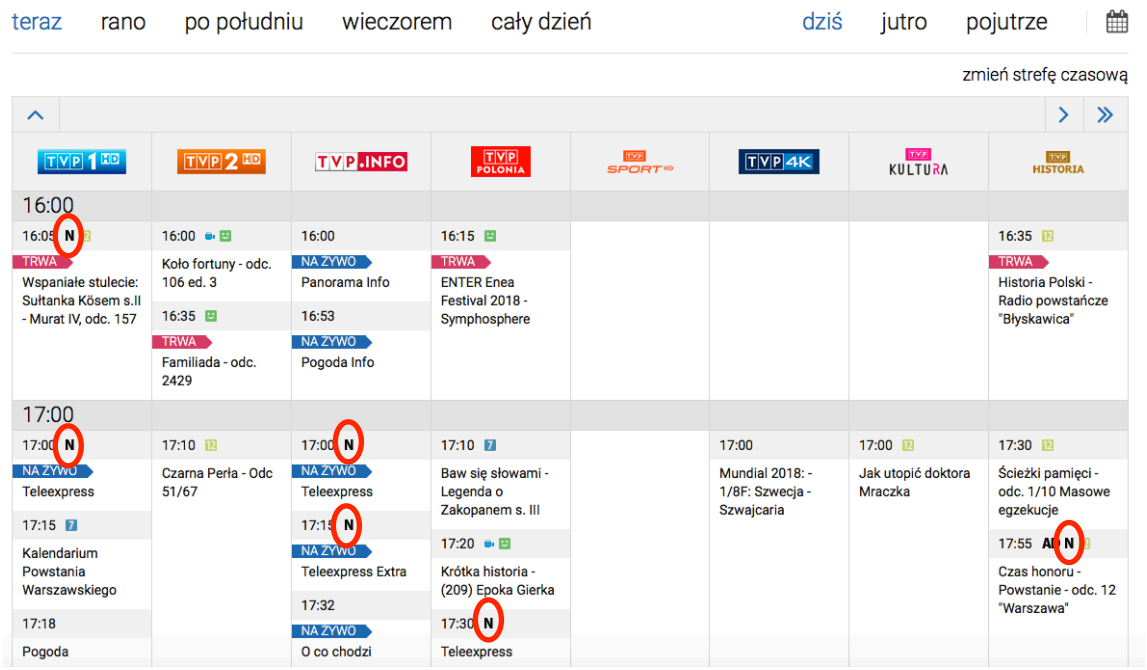


Figure 17: Indication of programmes with SDH on TVP

The use of the capital letter 'N' in Figure 17, circled in red, means that the programme comes with SDH. TVP, in particular, also has a separate webpage where all the programmes with SDH are listed for the current and following days: www.tvp.pl/dostepnosc/napisy-dla-nieslyszacych.

Figure 18 shows that, in the case of Polsat, the station indicates whether the programme is supported by SDH by using the label 'Napisy: TAK' [Subtitles: YES], directly under the title of the programme (circled in red):

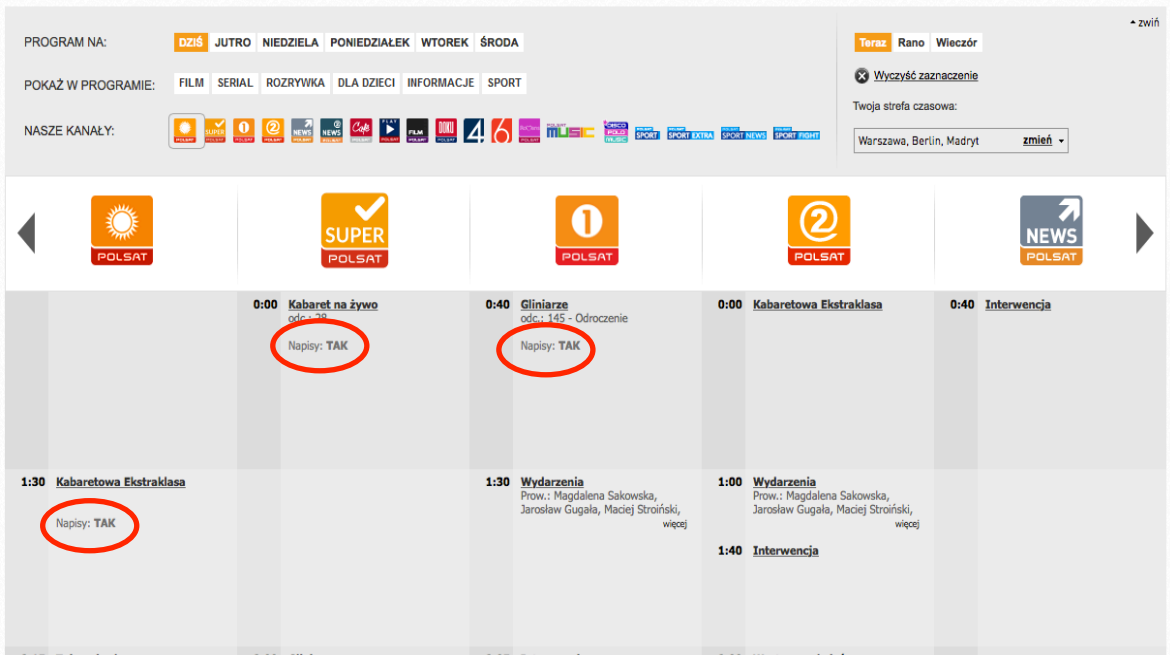


Figure 18: Indication of programmes with SDH on Polsat

TVN, on the other hand, prefers to indicate this type of information by means of the icon , also circled in red, which is reasonably easy to understand, as shown in Figure 19:

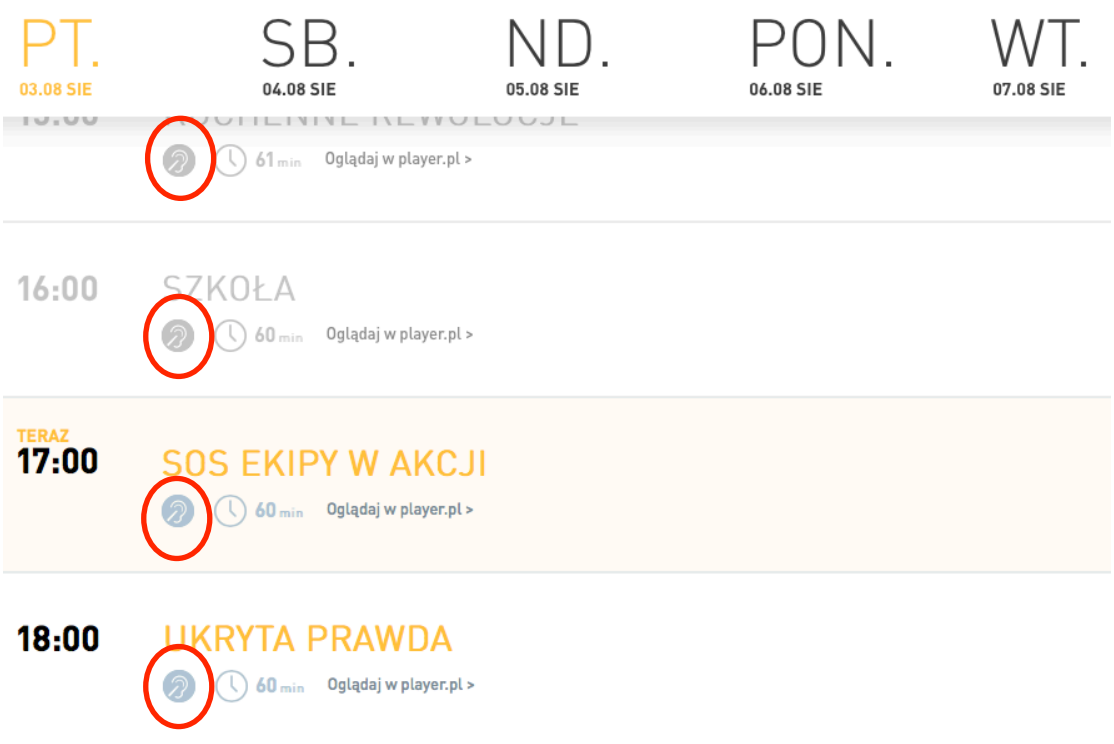
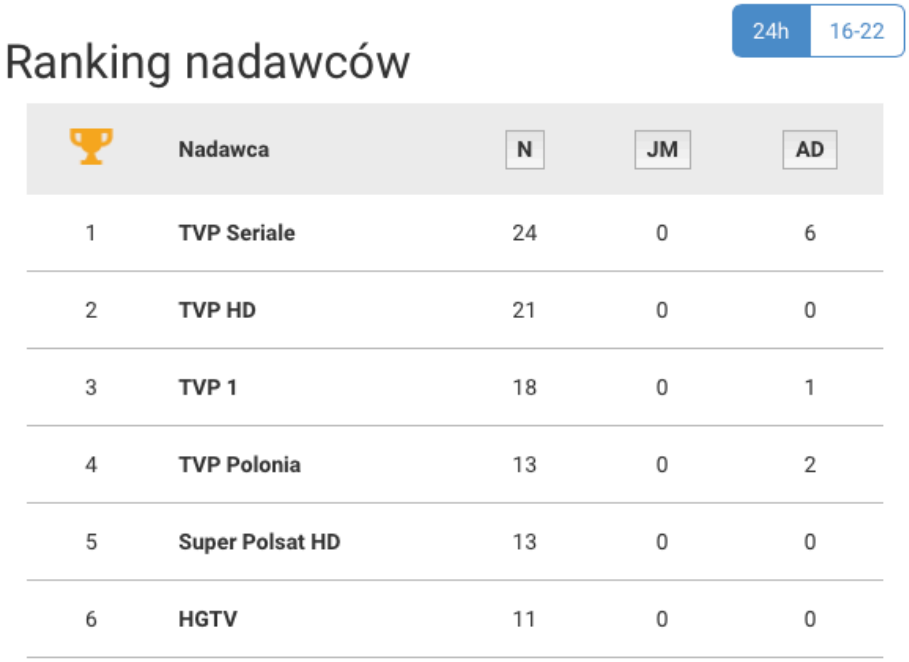


Figure 19: Indication of SDH on TVN

Nonetheless, on this particular occasion, even though the sign indicates that the programmes are suitable for deaf and/or hard-of-hearing people, and it appears under each one of the programmes listed on TVN's website, the reality is different. Indeed, when the same programmes, broadcast at the same time on the same day, were checked on the website of the Council mentioned above, the information showed that none of these programmes were actually scheduled for broadcast with SDH or PSL (Figure 20). Contradictions like these demonstrate that the veracity of the details included on some of these websites cannot be taken for granted:

Figure 20: Programmes on TVN with no indication of SDH provision

Despite potential glitches, all the above suggests that compiling the information about what programmes are going to be delivered with SDH, PSL or AD in one place definitely makes viewers' access to television more comfortable and rewarding. In addition to introducing this facility, the Council also provides information on the ranking of the various broadcasters according to the number of programmes delivered with SDH, PSL and AD either within 24 hours or during peak time in Poland, which is considered to be from 16.00 to 22.00 (Figure 21):



	Nadawca	N	JM	AD
1	TVP Seriale	24	0	6
2	TVP HD	21	0	0
3	TVP 1	18	0	1
4	TVP Polonia	13	0	2
5	Super Polsat HD	13	0	0
6	HGTV	11	0	0

Figure 21: Ranking of broadcasters according to the number of programmes offered with SDH [N], PSL [JM] and AD [AD]

Listings like this help viewers to monitor which stations have the highest number of programmes with different accessible services. They can also play a role in motivating broadcasters to provide more programming with SDH, PSL or AD in an attempt to outperform their competitors.

The offer of SDH on Polish television has improved greatly since the provision of accessible services became law in the country in 2011. As with other nations, quantity comes before quality, but thanks to the monitoring scheme set in place by the Council, it is hoped that deaf and hard-of-hearing viewers will not only have access to more programmes accompanied by SDH, but that they will also be able to consume subtitles with better quality. It is also expected that the information on how to activate the subtitles, as well as on the productions that contain these access services, will be presented in a more reliable and user-friendly manner. At the moment, clear instructions on how to switch on subtitles on analogue or digital television are only given on the TVP webpages that deal with accessibility: www.tvp.pl/dostepnosc. So far, other television stations lack this type of information.

Live subtitles on television

Until 2017, TVP was the only broadcaster in Poland to prepare subtitles for live programmes such as *Teleexpress, Teleexpress Extra, Wiadomości [News], Sport, Pogoda [Weather Forecast].* These subtitles are so called 'semi-live' subtitles, meaning that they have been created before the actual programme is aired and are cued in live, with the addition of any latest news information that may have occurred during the broadcast, if at all possible.

In March 2017, Polsat initiated live subtitling through respeaking for one of its programmes, *Taniec z Gwiazdami [Dancing with the Stars]*. This was the result of the Polish deaf community demanding subtitles for this programme after finding out that one of the participants was a deaf person and they wanted to follow her journey. When the first episode was broadcast without subtitles, deaf viewers, supported by NGOs and the media, sent Polsat their requests for accessible access. The action was very successful and the station commissioned a live subtitling service to Dostępni.eu [proper name], a team led by Monika Szczygielska, who had already had experience in delivering this service during conferences. This was the first time that live subtitles would be used on television via respeaking, and also for a very popular entertainment show during prime time. This was another step in the right direction and a proof of the power that deaf and hard-of-hearing communities have to initiate changes for the better.

3.3.4.2 DVD

The first film with SDH ever to be released on DVD on the Polish market was *Katyń* [*Katyn*], directed by Andrzej Wajda in 2008. Then, more distributors followed suit. Thanks to initiatives by foundations such as Kultura bez Barier [Culture without Barriers], Siódmy Zmysł [Seventh Sense] czy Katarynka (proper name), as well as to the growing awareness in society of the needs of deaf and hard-of-hearing people, an increasing number of DVDs are nowadays being published in Poland with intralingual SDH (Polish into Polish), which restricts the nature of programmes to national productions originally in Polish.

DVDs with interlingual SDH – that is to say with SDH tracks to accompany foreign productions in other languages – are very limited in number, and audiences with hearing impairments have to make do with the interlingual subtitles that are devised for hearing audiences. It seems that distributors struggle to acknowledge the specific needs of the deaf when consuming audiovisual programmes, particularly as regards the need to include the description of sounds and the identification of characters in the subtitles, and believe that standard interlingual subtitles should suffice.

As for the quantity of DVDs released with SDH, detailed information can be found on the websites of the various foundations and associations; for example Kultura bez Barier [Culture without Barriers, http://kulturabezbarier.org] lists all the films with SDH and/or AD on their website, including those that have been released on DVD. There are also DVDs published by the Polish public service television TVP, usually of films and series that have already been broadcast on television.

3.3.4.3 Internet

As regards subtitling on the internet, Polish deaf and hard-of-hearing viewers often resort to material available on websites such as napisy24.pl. Such portals – repositories of subtitle files – do not provide SDH as such, but rather standard interlingual subtitles that, although not tailor-made to suit the needs of the deaf and the hard-of-hearing, help them to gain access to some foreign films through the provision of fansubs. Fansubbing, or amateur subtitling (Bogucki 2009), gained in popularity in the mid-1990s, when free subtitling software became easily accessible on the internet (Díaz-Cintas and Muñoz Sánchez 2006). In Poland, this practice is still quite popular despite the issues connected with the illegality of distributing subtitle files online. In an attempt to clean up their image and to ensure that legal requirements are met, the moderators of these forums clearly state that the subtitle files hosted on their servers are to be used with legal copies of films, and that they are for personal use only.

In recent years though, again due to growing awareness of the need for SDH, there have been more projects enabling audiovisual materials with SDH on the internet. TVP was the first station to offer films with SDH on its website in the form of a repository of programmes: www.tvp.pl/dostepnosc/filmy-z-napisami-w-serwisie-tvppl. This can be seen as a first step towards providing SDH for all the programmes on VOD, like the BBC where SDH can be accessed on the BBC iPlayer website.

Another important internet-based repository of programmes with SDH in Poland is Adapter.pl, a website managed by the Katarynka foundation, which focuses on making audiovisual materials accessible to people with hearing or sight impairments. There are feature films and documentaries available for streaming. In addition, one can find articles about actors and films as well as projects and guidelines for preparing SDH and AD. There is also a separate section on the website devoted to the education of deaf and hard-of-hearing pupils, ‘Adapter w szkole’ [Adapter at school], where students and teachers can find films with standard as well as edited subtitles for the deaf and the hard-of-hearing. This way people who start or are in the process of learning Polish phonic language can access simplified and slower subtitling more suited to their current Polish language skills. Some of the films are also supported by Sign Language Interpreting.

When discussing internet-based accessible audiovisual materials, it is worth mentioning Ninateka, an initiative developed by the National Audiovisual Institute to enable viewers to access films and other digital materials dealing with culture. Accessibility services offered together with the materials include AD, SLI, and SDH. However, they have a different presentation from the regular services, as illustrated in Figure 22 and Figure 23:

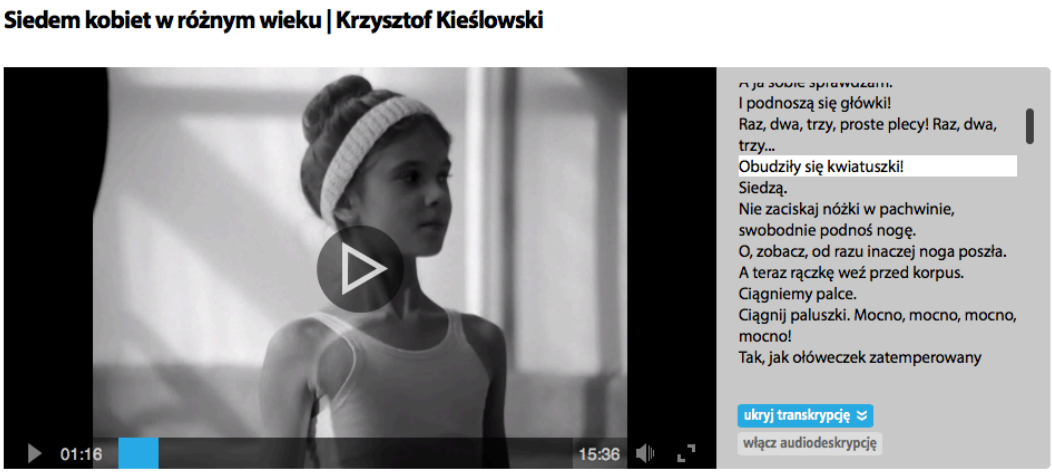


Figure 22: SDH in the form of a scrolling text

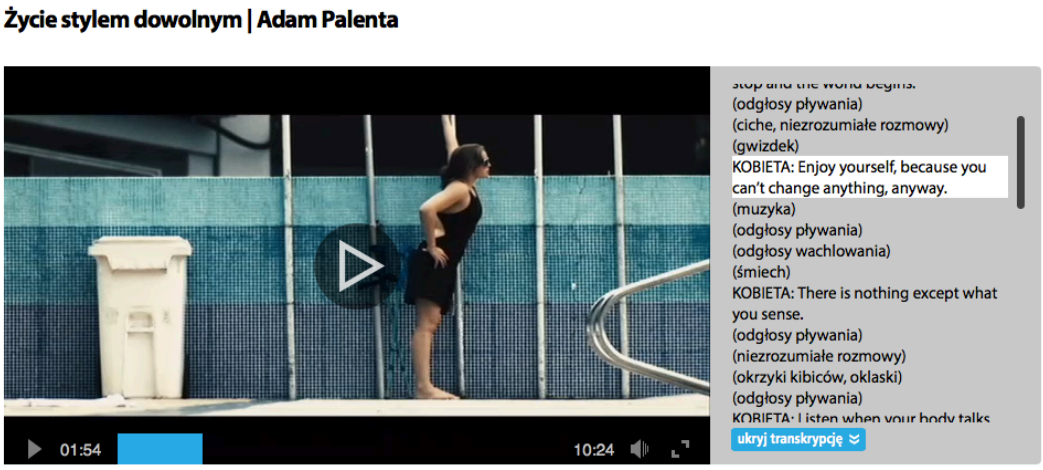


Figure 23: SDH in the form of a scrolling text

As shown above, the written text representing the dialogue appears in a scroll on the right-hand side of the screen. The text spoken by the character is highlighted in synchrony with the sound in the film. This novel approach also allows the viewers to have greater textual context, as they can see previous and subsequent subtitles.

Finally, international video-on-demand (VOD) platforms such as Netflix offer a wide selection of films with interlingual subtitles in Polish as well as Polish SDH that can be streamed by its members. Netflix also provides guidelines, freely available on their website, on how to create SDH in Polish (https://partnerhelp.netflixstudios.com/hc/en-us/articles/216787928-Polish-

Timed-Text-Style-Guide), thus ensuring a consistent approach and, ultimately, a better quality of subtitles.

3.3.4.4 Cinema

Cinema represents a rather interesting case from an accessibility point of view. Historically, Polish films have been screened without subtitles, but foreign productions have always been subtitled (unlike television, where the main mode used to translate foreign films has been, and continues to be, voiceover). It means that, even though these are standard interlingual subtitles without any SDH features, viewers with hearing loss ironically have better access to foreign productions than to national ones, with all the important cultural considerations that this implies. The situation is slowly improving thanks to concerted actions and cooperation with cinemas on the part of different foundations such as Culture without Barriers or Katarynka, as well as awareness initiatives, for instance Napisy Plus [Subtitles Plus], which focuses on campaigning for more and better quality subtitling in Poland. A good example of cooperation between foundations and cinemas is Katarynka and the cinema Nowe Horyzonty [New Horizons] in Wrocław, which prepare monthly screenings of subtitled and audio described films.

The importance of accessible cinema has been acknowledged by the Polish Film Institute by updating its documents for funding in 2016 to state that producers of feature films and full-length animation films must prepare SDH and AD tracks for the master copy of the film. This will ensure that films with accessible services can be screened in every cinema (Widzialni [proper name] Foundation n.d.a: online). The hope is that, alongside the films funded by the Polish Film Institute, as well as the increase in the accessibility awareness amongst other distributors, all films in Polish cinemas will have screenings supported by SDH in the not too distant future.

It is worth adding here that viewers themselves have the power to change things for the better. A great example of this was the initiative of the group Napisy Plus [Subtitles Plus] in 2014 after the film *Bogowie [Gods]* (dir. Łukasz

Palkowski) was shown in cinemas without SDH. As many deaf and hard-of-hearing viewers wished to see this popular film, Napisy Plus started a petition to the distributor and producer of *Bogowie [Gods]* to include an SDH track to the DVD version as well as to screen the film with subtitles in cinemas. After a few weeks they reached their goal and the film was adapted for deaf viewers. AD was also added to make the film accessible for blind and partially sighted audiences. With the growing awareness amongst the public about the need for accessible services the future looks hopeful. The next step in improving services for deaf and hard-of-hearing cinema goers might be an information hub about films screened with SDH in different cinemas, like www.yourlocalcinema.com functioning in the UK, where everyone can check for films with SDH in cinemas around the country.

3.3.4.5 Live events

Theatre

SDH in theatres is usually delivered in the form of surtitles, that is to say subtitles projected above the stage. These are cued in live during the performance but are prepared beforehand.

As regards SDH in theatres in Poland, associations once again play an important role in approaching theatres and offering cooperation in the preparation of subtitling files. Thanks to projects such as Teatr 'Poza Ciszą i Ciemnością' [Theatre 'Beyond Silence and Darkness'] by the Culture without Barriers foundation, more theatres are willing to offer such accessible services.

Other live events

Since 2013 live subtitling has been used in Poland during events organised by Culture without Barriers and Widzialni Foundation, and prepared by a team of professionals from Dostępni.eu. Live subtitles in the form of simultaneous textual transfer (Symultaniczny Przekaz Tekstowy – SPT) were first tested at the conference in Polish parliament in June 2013 and then at the President's

Palace in September 2013. The method was also trialled during an online transmission (Szczygielska n.d.), as shown in Figure 24:

Figure 24: Simultaneous textual transfer (Widzialni Foundation n.d.b: online).

All the tests confirmed live subtitling was technologically possible and appropriate for these types of conferences. The software used allows for respeaking and displaying the text, even though it does not produce the subtitles in the form in which we see them on television, cinema or even the theatre (for more information about live subtitling on television, see Section 3.3.4.1). Another important breakthrough in terms of the accessibility of live events took place during an inauguration of the programme, Dostępność Plus [Accessibility Plus], in which the government, entrepreneurs, social organisations and citizens collaborated in order to work towards better accessibility and equal treatment of all citizens in a physical and cultural environment, recreational activities, sport, healthcare, education, work, transport and information. At the conference the foundation Widzialni coordinated the accessible services that comprised an online YouTube transmission with PSL, subtitles created by Dostępni.eu and AD prepared by the Katarynka foundation.

All these developments show that providing SDH for different types of service is steadily improving in Poland. There is more awareness of their rights in deaf and hard-of-hearing communities, and they take an active part in demanding access to information from the relevant decision makers. More individuals are being trained in the provision of such services as well and are covering new areas, such as respeaking and working on live subtitling. Finally, non-governmental agencies play a significant role in organising and coordinating accessible events, offering guidance and support.

4 HISTORY OF SDH AND LEGAL REGULATIONS

The present chapter covers the beginnings of SDH, the reasons for its rise and the challenges associated with it. It also examines the legal side of SDH to ensure its growth and the maintenance of quality. The situation as regards SDH in some of the pioneering, more advanced countries in terms of the development of accessible services, such as the USA and the UK, is discussed first, before turning to SDH in Poland.

The chapter starts with an outline of the international regulations in place to keep every country on track regarding the introduction of accessibility laws and their practice, particularly in relation to SDH. Next, the history and legal regulations in the USA and the UK are analysed in more detail, as these are two of the best examples of countries where strong lobbying on the part of the deaf themselves has led to the speedy enforcement of SDH-related legislation. Finally, the development of SDH in Poland and Polish national regulations are discussed in order to show the correspondence between existing laws and the current situation in the country from a historical and legal perspective.

4.1 International regulations

At an international level, sign language was the first accessibility service to be recognised by the 2007 UN Convention on the Rights of Persons with Disabilities, which came into force on 3 May 2008, and which is "the first international document to mention sign language explicitly and therefore safeguarding [sic] the rights of sign language users" (Wheatley and Pabsch 2010: 18).

The convention was the first international treaty ever issued to refer to the cultural and linguistic identity of deaf people and mention their right to education in their natural language explicitly. It also specifically refers to the access of the deaf and hard-of-hearing to audiovisual media:

> States Parties recognize the right of persons with disabilities to take part on an equal basis with others in cultural life, and shall

> take all appropriate measures to ensure that persons with disabilities:
> a. Enjoy access to cultural materials in accessible formats;
> b. Enjoy access to television programmes, films, theatre and other cultural activities, in accessible formats;
> c. Enjoy access to places for cultural performances or services, such as theatres, museums, cinemas, libraries and tourism services, and, as far as possible, enjoy access to monuments and sites of national cultural importance (UNCRPD 2007: 22).

Poland signed the convention in 2007 and ratified it at the Parliament on 6 September 2012, which means that, given the binding nature of the convention, it is obliged to introduce and endorse bilingual education in schools for the deaf, to promote teaching and learning in Polish Sign Language (PSL) and to foster the mastering of Polish as a foreign language among the Deaf.

At an EU level, the European Parliament issued the Resolution on Sign Languages for the Deaf in 1988, reiterating it a decade later in 1998, in which it is emphasised that the majority of the Deaf are not fluent in spoken languages and that their preferred means of communication is sign language (Wheatley and Pabsch 2010). This resolution strengthened the position of sign languages as languages in their own right. With the same aim, in 2003 the Council of Europe issued the Recommendation Regarding the Protection of Sign Languages in the Member States of the Council of Europe, in which it encouraged member states to recognise their respective sign languages. However, according to Wheatley and Pabsch (2010: 21), "[a]lthough there have been a number of reports and recommendations, a legal instrument has not (yet) been implemented at European level".

The first piece of legislation at European level specifically mentioning accessibility to audiovisual programmes was Directive 2007/65/EC of the European Parliament and of the Council from December 2007, followed by Directive 2010/13/UE, which was issued jointly by the European Parliament and the European Council in March 2010. It encouraged providers to ensure that their services were accessible for sensory impaired people by broadcasting programmes with sign language interpreting, SDH, and AD. Poland implemented the directive in 2011, as discussed below (see Section 4.4.1).

4.2 USA

The advent of synchronised dialogue in films, marked commercially by the release of Alan Crosland's feature film *The Jazz Singer* in October 1927 in the USA, was a great technological step forward in the history of cinematography. Even though there were barely two minutes of spoken dialogue and the rest continued in the form of intertitle cards, *The Jazz Singer* became a huge commercial success and marked the end of the silent movie era and the beginning of the talkies (History of Information n.d.). Paradoxically, it meant a step backwards in terms of access services for the deaf and the hard-of-hearing, as it turned out that they could no longer enjoy the new cinema since dialogue exchanges were now transmitted only aurally and did not come supported with intertitles or any other graphic form of assistance. Technology, or rather the lack of it, made it impossible for people with hearing impairments to follow sound-based films. It was then that Emerson Romero, a deaf actor himself, thought of making films accessible to deaf viewers once again. In 1947, he managed to insert text in between film frames using the same method as that of the silent film era (DCMP 2004). It meant, however, that the flow of the film was continually disrupted. Another method, invented by a Belgian company, followed. It consisted of printing captions onto a master copy of a film,[10] corresponding to what is known today as 'open subtitles' or 'captions', that is, subtitles or captions that are an integral part of the images and cannot be switched on or off. The invention of this method allowed the newly created company, Captioned Films for the Deaf (CFD), to grow their business. The funds were provided by The Captioned Film Act, which was passed in 1959 (Robson 2004).

As new forms of media appeared on the market, CFD was renamed Captioned Media Program (CMP) and has continued its work in the USA ever since. It provides deaf and hard-of-hearing people with free loans of captioned films and specialises in captioning educational and special interest materials, relying on

[10] The term 'subtitles', and more specifically the expression 'subtitles for the deaf and the hard-of-hearing' (SDH), is used in the UK and the rest of Europe. On the other hand, the term 'captions' is much more often used in the USA, Canada and Australia.

consumer suggestions. Part of their remit is also to help new captioning agencies by sharing best practice on the creation of captions. CMP captioning guidelines, known as Captioning Key, can be accessed online (www.captioningkey.org/quality_captioning.html), and they are a most valuable resource that focuses on the production of entertainment and educational captions. They extend the range of audiovisual materials that need to be made accessible to deaf and hard-of-hearing audiences beyond feature films and have an active role in introducing them into schools and other educational settings. In 1971, all the major stakeholders involved in captioning in the USA (that is to say producers, federal agencies, consumers, teachers and other professionals) met at the first National Conference on Television and discussed the future of captioning. The conference's principal achievement was the decision to develop the system of closed captioning that had been initiated by the National Bureau of Standards (NBS), which in essence meant assigning a portion of the video system, not used in regular transmissions (Vertical Blanking Interval), to the encoding of captions (Norwood 1988). The following year, the National Association of Broadcasters worked out a roadmap for introducing closed captioning on television. The association discussed the need for developing decoders as well as the potential costs involved in captioning television programmes. This led to the establishment of an independent organisation that would deliver captioning services to broadcasters at a low cost (DCMP 2004), thus signalling the birth of the National Captioning Institute (NCI) in 1979. The first year in which the NCI operated was extremely successful in terms of the volume of captioning produced and, by March 1980, NCI were captioning up to 20 hours of entertainment programmes per week, mostly for prime time viewing (Cronin 1980). The majority of the captioners at NCI were former employees of the Caption Centre at the WGBH (Western Great Blue Hill) television station – the first ever television captioning agency, which was created in 1972 (NCI n.d.) and produced open captions for television throughout the 1970s. All the various initiatives mentioned above are good examples of a roadmap to ensure the development of captioning.

In 1982, real-time captioning started in the USA, when the company Translation Systems, Inc. (TSI) developed a captioning system called InstaText (Block and

Okrand 1983). According to Norwood (1988:7), “On October 11, 1982, the first real-time closed-captioning took place with the broadcast of ABC’s ‘World News Tonight’”. Respeaking, known in the USA as voice writing or real-time voice writing (Romero-Fresco 2011), originated in a courtroom in the early 1940s (NVRA 2008 in Romero-Fresco 2011). At first, microphones were used to record all the voices that would be transcribed later on. However, the noise level was too high to ensure a good quality transcript. Another solution came into being, and a reporter would repeat the original speech word by word into a microphone using a stenomask *(ibid.)*, and this recording would then be used as the basis for a more accurate transcription. The reporter Horace Webb was the first to initiate this service, now called stenomasking or voice writing, and thus laid the basis for respeaking or real-time voice writing. According to Romero-Fresco (2011: 7), respeaking was first introduced on television in 2003 “by Chris Ales and Mark Hall Associates in news and Home Shopping Network respectively”. The next challenges involved captioning on the internet and the radio. As reported by the National Association of the Deaf from the USA (www.nad.org), even though the number of people watching videos online is increasing, only a fraction of audiovisual materials suitable for deaf and hard-of-hearing people are available on the internet. Even though programmes have been captioned on television, they are not distributed with captions on the internet. The legal regulations described below are more precise regarding the accessibility of government agency websites but leave a lot to be desired as regards business websites. Regarding the radio, in 2006, National Public Radio (NPR) and WGBH’s National Centre for Accessible Media (NCAM) received a grant from The USA Department of Education to work on technology in order to make radio accessible to deaf and hard-of-hearing people. Two years later, NPR provided live captioning of the presidential elections on the internet (*ibid.*).

4.2.1 Legal situation in the USA

Towards the mid-1980s, awareness of the need for access to audiovisual information by US citizens with sensory impairments was rising, and several acts were passed to ensure a steady increase in the number of captioning hours on television. The most influential acts included the Television Decoder

Circuitry Act of 1990, which stipulated that 13 inch or larger screens had to have an in-built decoder able to display captions, and the Telecommunications Act of 1996, which directed the Federal Communications Commission (FCC, www.fcc.gov) to implement mandatory volumes of captioning. After 2 years of designing and implementing the mandate, FCC rolled out a phase-in programme to increase broadcast captioning. Programming was divided into 'pre-rule' – that is to say that it existed before the Telecommunications Act took effect – and 'new', referring to any programmes aired after the implementation of the act. Table 4 and Table 5 show the required phase-in increase in captioning on television for both English and Spanish programming:

Hours per quarter	English language	Spanish language
450	1 January 2000	1 January 2001
900	1 January 2002	1 January 2004
1,350	1 January 2004	1 January 2007
100 % (with exemptions applied)	1 January 2006	1 January 2010

Table 4: Phase-in captioning requirements for 'new' programming (Robson 2004: 40)

Captioning required	English language	Spanish language
30%	1 January 2003	1 January 2005
75%	1 January 2008	1 January 2012

Table 5: Phase-in captioning requirements for 'pre-rule' programming (Robson 2004: 40)

In 2014, a symptomatic shift in the policies of the FCC can be observed. They were moving away from a focus on captioning quotas on television to enhancing quality. The new rules centred on topics like accuracy, synchronicity, programme completeness and the placement of captions (FCC 2016). Since then, the FCC has also taken action to regulate internet provision. Nowadays, all captioned programmes on television must also be captioned when they are shown on the internet at a later date (FCC: Captioning of internet Video Programming, online). The phase-in increase in internet captioning started back in 2012, as shown in Table 6:

Full length internet video programming	Pre-recorded programming that has not been substantially edited for	30 September 2012

	internet distribution	
	Live and near-live[11] programming	30 March 2013
	Pre-recorded programming that has been substantially edited for internet distribution	30 September 2013
Internet video clips	Video with a single excerpt of captioned TV programme	1 January 2016
	Video with multiple excerpts of captioned TV programme	1 January 2017
	Videos of live and near-live TV programmes	1 July 2017
Archival internet video programming	Within 45 days after the video is shown on TV with captions or between 30 March 2014 and 29 March 2015	
	Within 30 days after the video is shown on TV with captions or between 30 March 2015 and 29 March 2016	
	Within 15 days after the video is shown on TV with captions or from 30 March 2016	

Table 6: The phase-in internet video captioning in the USA (FCC 2018)

Such compulsory phase-in programmes ensure that broadcasters can plan the provision of their accessible services better, and viewers know what they can expect in terms of the amount of captioning on television. Good scheduling of increased accessible services on television as well as efficient monitoring of their quantity and quality by the regulator means that all citizens have equal access to television.

4.3 UK

As regards the first steps of SDH on the European continent, it was not until 1949, two years after Romero's attempts to revive the silent movie intertitle technique, that Arthur Rank showed a captioned film at a cinema in London. He etched the captions onto the glass slides placed in the projector (Boatner 1980) so that they could be shown on a smaller screen next to the one onto which the actual film was being projected. A technician operating the projector was also responsible for synchronising the appearance of the slides with the film dialogue. It was a rather cumbersome, tiresome process and turned out to be a one-off event (*ibid.*). The deaf would have to wait until 1979, when the BBC first

[11]Performed and recorded less than 24 hours before first shown on TV.

screened a documentary about deaf children, *Quietly in Switzerland*, which was broadcast with subtitles and delivered via Ceefax teletext (BBC 2008).

Like the USA, the first experiments with live subtitling in the UK took place in 1982, when ITV decided to subtitle events such as the Pope's visit to the United Kingdom or the World Cup (Romero-Fresco 2011). During those events, standard QWERTY keyboards were used to produce live subtitling, but they proved to be too slow. Expert typists could reach up to 120 wpm, whereas the average speech rate of TV presenters was about 180 wpm (*ibid*.). Next, Velotype (Figure 25) – a syllabic chord keyboard – was tested. It enabled the typist to press several keys at once, thus producing syllables and words instead of individual letters. In this way, it was claimed that faster speeds of up to 200 wpm could be achieved. However, after a 12-month training period most typists could only sustain a speed of 90-120 wpm (Lambourne *et al.* 2004).

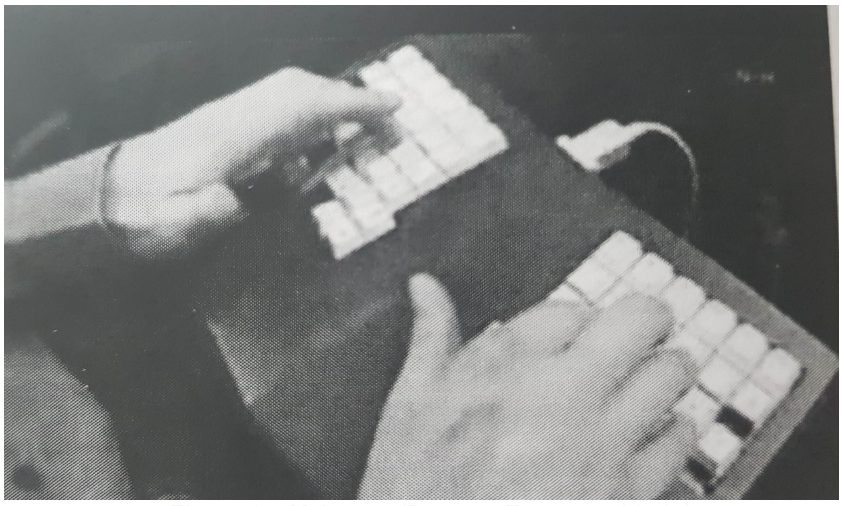


Figure 25: Velotype (Romero-Fresco 2011: 14)

The tandem or dual keyboard method, photographed in Figure 26, required the participation of two subtitlers, who would share the work on an audiovisual programme at the same time, and was also tested by ITV in 1987. After 6 months of training, the typists involved in the experiment could reach up to 150 wpm (Romero-Fresco 2011):

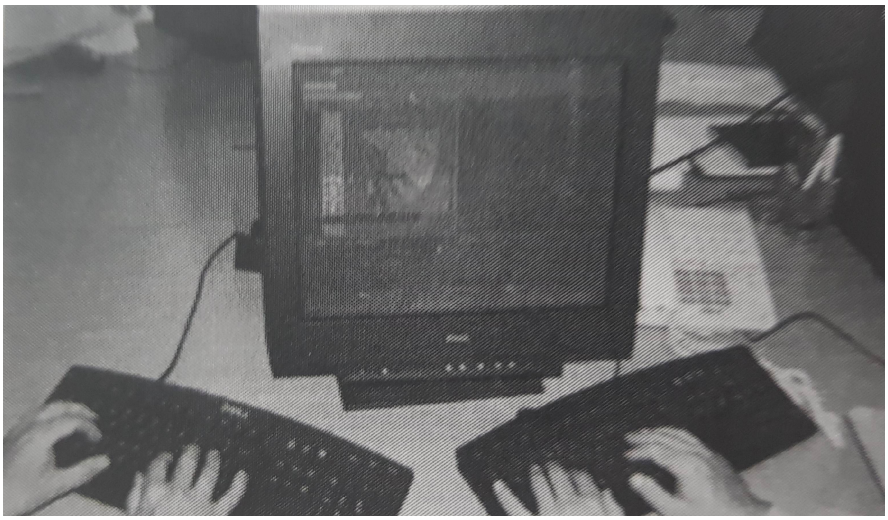


Figure 26: Dual keyboard (Romero-Fresco 2011: 14)

Stenocaptioning was yet another technique trialled in live subtitling scenarios on account of the fast typing speeds reached by professional typists. Court reporters, the professionals most reliant on this method, can type at speeds of around 200 to 250 wpm, with some experts reaching over 300 wpm. The main downside of this method is the long training period that is required – some 2 to 4 years –, which makes it rather expensive for broadcasters. Finally, in 1998, thanks to advances in automatic speech recognition (ASR), respeaking was developed and tested by Synapsys Ltd. (later to become Sysmedia and nowadays Screen Systems) in collaboration with the University of Herfordshire. A few years later, in April 2001, the BBC introduced respeaking for the first time to cover the broadcast of the World Snooker Championship. The initiative proved to be successful and was replicated with other sports events, parliamentary sessions and regional and national news (*ibid.*). Table 7 below offers a comparison of the main features characterising the various methods tested for the production of live subtitles:

	Training time	Speed (wpm)	Costs	Delay / Latency	Accuracy	Seriousness of errors
Velotype	12 months	Medium (90-120)	Medium	Medium	95%	High
Dual keyboard	6 months	Medium / high (140-150)	Medium	Medium	95-98%	Low
Stenotype	3 years	Very high (220-300)	High	Low	97-98%	Medium
Respeaking	2-3 months	High (160-190)	Low	Low	97-98%	Medium / high

Table 7: Comparison of live subtitling methods (Romero-Fresco 2011: 15, based on Lambourne 2007)

As shown above, respeaking seems to be the most efficient method when we take into account not only the period of training that is needed, potential speeds and the costs involved, but also the latency and linguistic accuracy of the subtitles being shown on screen. Yet, the biggest disadvantage is the seriousness of the errors that can arise during respeaking, so this is one of the areas that Ofcom (2013), the UK's communications regulator, is concentrating on when measuring the quality of live subtitling.

4.3.1 Legal situation in the UK

Like the USA, once the technological issues involving the presentation of subtitles on television had been resolved in the UK, the British government started to play a proactive role in securing the quantitative increase of subtitled content on television. Until December 2003, the Independent Television Commission (ITC) was the body responsible for providing TV channels with guidance on technical standards for subtitling. In 1999, the ITC released a detailed document to serve as a set of guidelines for broadcasters regarding the preparation of closed subtitles.[12] In 2003, the Office of Communications became

[12] ITC (1999) acknowledged their sources in the following terms: "Much of the detail has been taken from an earlier handbook produced by the Independent Broadcasting Authority following research conducted at Southampton University. […] Further information on the use of subtitles has also been included as a result of a research project conducted on behalf of the ITC and

the new communications sector regulator. Following the 1990 Broadcasting Act, the 1996 Broadcasting Act and the Communications Act in 2003, Ofcom required television channels to gradually increase the volume of subtitled programming. The 10-year targets for SDH, SLI and AD were set at 80%, 5% and 10% respectively for all stations with larger audience shares (Ofcom 2017a). The ultimate percentage would be achieved by the steady increase in accessible programmes from the set date (this was different for different providers) on a yearly basis, as presented in Table 8 below:

Anniversary of relevant date or notice date[13]	Subtitling	Signing	Audio Description
First	10%	1%	2%
Second	10%	1%	4%
Third	35%	2%	6%
Fourth	35%	2%	8%
Fifth	60%	3%	10%
Sixth	60%	3%	10%
Seventh	70%	4%	10%
Eighth	70%	4%	10%
Ninth	70%	4%	10%
Tenth	80%	5%	10%

Table 8: Targets for accessibility services for channels with larger audience shares (Ofcom 2017a: 4)

It is worth mentioning here that the UK is an exception on the European broadcasting mediascape in the sense that, in 1999, the BBC had already committed itself ahead of regulations to subtitling 100% of their programmes on

BBC during 1990 and 1991 by Bristol University and the ITC research into Subtitling for Deaf Children 1996".

[13] 1 January 1997 for BBC One and BBC Two, 1 January 1998 for Channel 5 and 1 January 2000 for Channels 3 and 4 as well as S4C Digital. For digital services, the year was 2003, and for television stations that started their operations after 2003, it was the date they commenced their provision (Ofcom 2012).

their main channels (BBC One, BBC Two, BBC Three, BBC Four, Cbeebies, CBBC and BBC News) by 2008, and succeeded in their endeavour (BBC 2008). What is more, as Remael (2007: 25) observes when writing about subtitling in Western Europe: “In almost all countries, public television is far ahead of commercial channels, with the exception of the UK, where public and commercial channels alike provide SDH”.

Whilst the first policies concentrated on the amount of SDH provided, today Ofcom’s policies focus more on the quality of subtitles, although they still ensure that the volume of subtitled programming is increasing on all channels. As most complaints on the part of the viewers are related to live subtitles (Ofcom 2014), Ofcom decided to explore this area in greater detail. Thus, in April 2014, Ofcom published its first report on the quality of live subtitling on television (*ibid.*).

The situation regarding on-demand programme services (ODPS) in the UK is not yet regulated. As we can see in Figure 27 and Figure 28, there is a slow increase of accessible services on video on demand programmes in comparison with the provision of accessibility for television broadcasting.

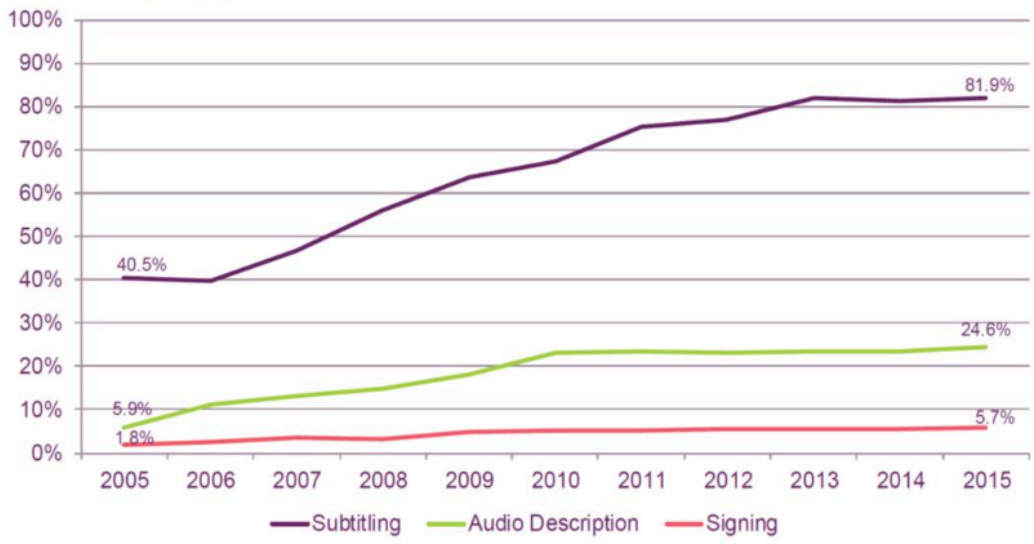


Figure 27: Accessible services on television broadcasts (Ofcom 2017b: 4)

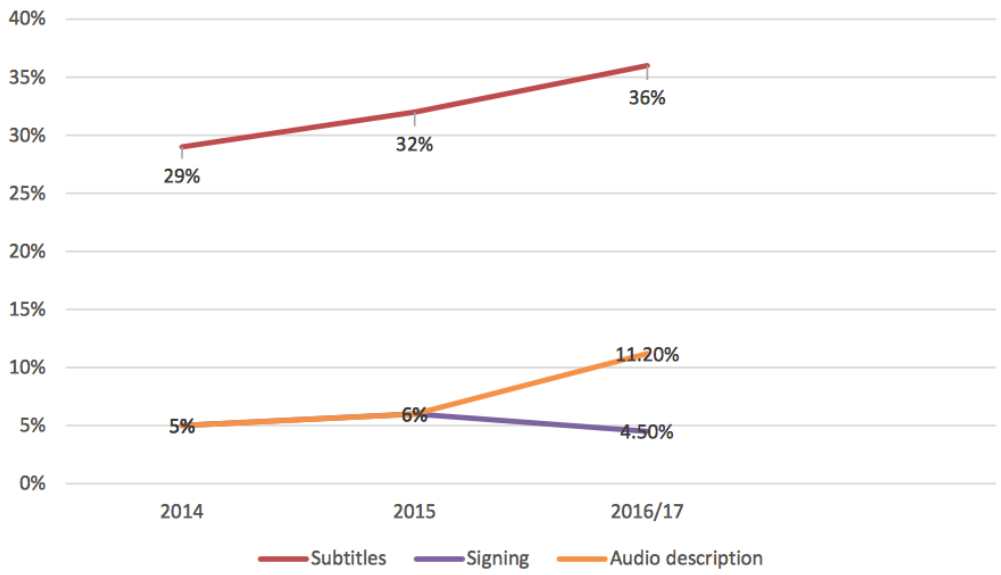


Figure 28: Accessible services on ODPS (Ofcom 2017b: 4)

However, while the Communications Act of 2003 called for accessible services for broadcasting only, the Digital Economy Act of 2017 sought to include obligations for the provision of accessible services on ODPS as well. This led Ofcom to initiate consultations in this area, the results of which were to help the government draft the regulations (Ofcom 2017b). The consultation was closed for responses on 3 April 2018 and, at the time of writing, no other statements have been published by Ofcom.

4.4 Poland

In Poland, people with hearing loss have been able to watch television programmes with SDH since 1 January 1994, when the Polish public service television Telewizja Polska (TVP) screened *Rio Grande* (John Ford, 1950), via teletext. It is worth noting that TVP was the first network to introduce SDH in the country, 17 years before it actually became mandatory for broadcasters to provide accessible services. In the early years, subtitlers worked on feature films only, but other genres soon followed suit and, in 2008, programmes with SDH included all series and feature films shown immediately after the main daily news, as well as selected documentaries and shows (Künstler 2008). In 2007, TVP started providing semi-live subtitles for the main news programme

on a daily basis. Semi-live means that the script is prepared shortly before the actual broadcast takes place and a subtitler cues the subtitles during the news. The first programme with live subtitles prepared through speech recognition was shown on Polsat in March 2017, as noted in Chapter 3. However, respeaking on television is not a regular practice and, so far, this was a one-off event.

As we saw in Chapter 3, TVP is the only broadcaster for video-on-demand VOD services that offers a repository of films with SDH. This is not a standard VOD service in the sense that new programmes with SDH are added regularly, but involves a set number of films that were added to the website at one point.

4.4.1 Legal situation in Poland

The first legal attempts to ensure the provision of accessible services in Poland were very general and tended to deal more with disabilities and citizens' right to equal access to information rather than the more specific issue of access to audiovisual media. Article 32 of the Act of 2 April 1997 from the Polish Constitution (Sejm Rzeczypospolitej Polskiej [The Parliament of Poland] 1997). states that all citizens are equal before the law, that they have the right to equal treatment by public institutions, and that nobody can be discriminated against in public, social or economic life. The Act of 27 August 1997, (Dziennik Ustaw [Journal of Laws] 1997), which focused on vocational and social rehabilitation as well as on the employment of people with disabilities, introduced the concept of a disabled person into the Polish legal system and established a system of socio-economic benefits for the disabled. On 19 August 2011, *Ustawa o Języku Migowym i Innych Środkach komunikowania się* [the Act on Sign Language and Other Systems of Communication] (Kancelaria Sejmu [Administrative Office of the Parliament] 2011) replaced *Ustawę o Rehabilitacji Zawodowej i Społecznej oraz Zatrudnianiu Osób Niepełnosprawnych* [the Act on Occupational and Social Rehabilitation and on Employing the Disabled] from 27 August 1997. This was the first step to giving PSL more prominence and deaf citizens more rights in society. The document was the first legal act to refer to PSL as the natural language of the Deaf, and it also stated that they had the right to use

sign language interpreting services when dealing with public administration agencies, although it did not make any explicit reference to the use of PSL in education. As the above-mentioned 2007 UN convention required nations to address the role and use of sign language in the classroom, it was to be expected that Polish legislators would have to amend or issue another national act in order to resolve this debate.

The year 2011 can be considered a milestone as regards accessibility to audiovisual media in the country because it saw the first piece of legislation regulating the provision of accessibility services on Polish television. The Amendment to the National Broadcasting Council Act was issued on 25 March 2011 and implemented on 23 May 2011 (Dziennik Ustaw [Journal of Laws] 2011). Article 18a states that television broadcasters are obliged to provide accessible services during at least 10% of their broadcasting time, including AD, SLI and SDH[14]. As Article 18a mentions only a global percentage of accessible services, there are no clear figures as to how much providers would be required to deliver for each one of them. Supervision of the provision of the audiovisual media accessibility services was to be the responsibility of The National Broadcasting Council, a constitutional body responsible for the defence of the freedom of expression, the right to information and the safeguarding of the public interest on radio and television (KRRiT n.d.). It attempted to secure satisfactory solutions for viewers and put forward achievable targets for broadcasters. It also had the right to impose fines on broadcasters that failed to abide by the legal requirements. However, one of the main criticisms of these fines is that, for some broadcasters, it can be cheaper to pay the fine than to actually prepare accessible services.

In the regulatory strategy document for the years 2014-2016, the National Broadcasting Council (2014) stated that it would recommend legal changes to Article 18a to secure an increase in the volume of accessible services being offered on Polish television, with a view to reaching 50% by 2020. Indeed, there

[14] It also stated that the National Broadcasting Council could establish lower percentages depending on, for instance, the technical possibilities of the broadcasters or the nature and variety of the programmes on show.

was another amendment to the National Broadcasting Council Act issued on 22 March 2018 (Kuchciński 2018), which increased the obligatory provision of accessible services by television providers from 10% to 50%, excluding advertising. However, 50% of accessible services is not expected to be reached by broadcasters by 2020, as stated in the strategy documents, but by 2024.

The amendment to the act calls for the National Broadcasting Council to decree the most effective type of service for a particular programme, taking into account the needs of people with sensory impairments, the time taken to broadcast the programme, as well as technical issues in the transfer of accessible services and broadcasters' possibilities. In addition, it states how much accessible programming should be available in the following years, up to 2024, when 50% of accessible programming should be reached:

- 15% in 2019
- 25% in 2020-2021
- 35% in 2022-2023
- 50% from 2024

On 22 June 2018, the National Broadcasting Council issued a proposal[15] for a decree on the provision of accessible services on television (KRRiT 2018b). The decree presented the percentages for SDH, PSL and AD for different types of programming (see Table 9) from 2024:

Accessibility services	**SDH**	**PSL**	**AD**
General programmes	40%	3%	7%
Specialised programmes (with 50% + of specialised content)			
News	44%	6%	---
Entertainment / sport	45%	3%	2%

[15] Public consultations were extended to the end of August 2018, by which time this thesis had already been finalised.

Feature films	47%	---	3%
Documentaries	45%	3%	2%
Religious, historical, cultural, educational	40%	5%	2-5%
Children	20%	20%	10%
Sport events transmissions	44%	---	6%
Other specialised programmes	40%	7%	3%
Progammes reaching up to 500,000 people	10%	1%	2%
Music programmes	20%	---	4%

Table 9: Targets for accessible services on television from 2024, as proposed by the National Broadcasting Council (2018)

The Council stated that, in proposing the targets, the following matters would be considered: the needs of people with sensory impairments as well as the technical and financial possibilities of broadcasters, transmission methods for accessibility services in Poland, the results of public consultations regarding the council's strategies for 2017-2022 and the council's statements related to SDH, AD, or information concerning accessible programmes, as well as legislative works of the European Parliament and the Council on the amendment of the Audiovisual Services Directive and regulations implemented in other European countries. Moreover, the National Broadcasting Council justified the numbers by admitting that SDH is the cheapest and easiest type of accessible service to implement, whereas PSL is technically more difficult, although at the same time it might be the most beneficial for prelingually deaf people. Finally, while AD is the most expensive and difficult to implement, it is the only accessible service for people with visual impairments. Even though these percentages might not be satisfactory for the target viewers, it is encouraging that the Council, after public consultations, has started differentiating between the relevance of the three different accessible services depending on a type of programme.

It is worth mentioning that one of the most important issues addressed by the Council was to distinguish between standard subtitles and SDH, and count regular subtitles as only 0.7 of accessible services. There was also a mention of

live subtitles, although this would need to be elaborated on. It was predicted that obligatory percentages of accessible services in live programmes would require the implementation of live subtitling. On the other hand, no differentiation was made between PSL (Polish Sign Language) and SP (Signed Polish). In addition there were no requirements for the provision of accessible services on the internet, apart from the fact that all programmes with accessible services shown on television should be clearly marked.

The picture of accessibility services on Polish television proves that, as elsewhere, there must be clear legal regulations implemented in order to increase the number of programmes with accessible services. Examples from other countries such as the USA and the UK show that a staggered increase in obligatory accessibility works well. It is encouraging that Poland is feeding on the experience of other countries in this field and implementing similar strategies. It is also worth mentioning that all the changes in regulations are always preceded by public consultations, which helps to attend to all stakeholders' needs and expectations, as well as preventing criticism once the regulations are implemented. There is still a long way to go in order to achieve 100% of accessible services on television in Poland, but the steps taken so far would indicate a steady improvement.

5 THE NATURE OF SDH

The present chapter concentrates on the specific characteristics of SDH. Even though some of the parameters analysed here (reading speed and editing) are also relevant in interlingual subtitling, the focus here is on how they are managed in SDH. The four parameters explored in this chapter are: (1) the assumed **reading speed** of the viewers (depending on the target audience's knowledge of spoken language), (2) the degree of **editing** (primarily in intralingual SDH), (3) the addition of **extralinguistic information** and (4) **paralinguistic information**. The last two categories are visually the most obvious, as they are presented on the screen in the form of descriptive labels, colours and positioning.

The reading abilities of people with hearing loss have raised many questions about the most appropriate expected reading speeds in SDH, as well as the amount of editing needed. These two issues are intrinsically connected as we shall see below. They constitute two of the most controversial areas in studying SDH, as there is a clear dissonance between the target audience's expectations of verbatim subtitles and the technical constraints of subtitling. Next, extralinguistic information, incorporating acoustic nonverbal features of SDH such as instrumental music and sound effects, and ways of identifying characters, as well as paraliguistic information such as the manner of speaking, tone, pitch of voice, etc. are explored in detail in order to provide a comprehensive background for the study presented in Chapter 6.

5.1 Speed in SDH

Subtitle speed is one of the key factors that regulate the presentation of SDH onscreen. As stated in the Ofcom report (2005: 11), "Whilst for the subtitle user, speed is not an immediate topic of concern, it is arguably the key underlying issue behind nearly every important issue". Subtitle speed is inherently related to the amount of editing that needs to take place in SDH; it is, therefore, the influencing factor in the everlasting verbatim-edited subtitling debate (see Section 3.3.2 and Neves 2005, 2008, Romero-Fresco 2009). In general, deaf

and hard-of-hearing viewers prefer subtitles as close to the original dialogue exchanges as possible (Jensema and Burch 1999, Neves 2005, Shilperoord *et al.* 2005, Szarkowska and Laskowska 2014). Word-for-word transcription, however, calls for higher subtitle speed rates onscreen if attention is to be paid to the accurate synchronisation of subtitles with dialogue and visuals. This, in turn, might lead to viewers struggling to follow fast subtitles, especially if we take into account the fact that the average reading speed of an adult is around 66% of their average speaking speed (ITC 1997 in De Linde and Kay 1999), which in principle would call for the reduction of a subtitle by a third (*ibid*.). The lower the assumed speed of the audience, the more editing needs to take place when dealing with the ST, which in turn should allow viewers to read the subtitles in a comfortable manner. However, if the speed at which the subtitle is presented onscreen is much lower than the viewers' reading speed, it might result in the re-reading of the subtitles on the part of the viewer (Szarkowska and Gerber-Morón 2018). The challenge, therefore, is to set subtitle speed rates as closely as possible to the viewers' assumed reading speed rates. The situation is further complicated by the heterogeneity that exists amongst the target audience.[16] Yet another issue to take into account when watching audiovisual productions is the fact that viewers not only read the subtitles but must also watch the visuals. All this shows how important it is to adjust the presentation speed of the subtitles in such a way that they are easy to follow whilst allowing enough time to appreciate and enjoy what is happening on the screen.

The current section addresses the matter of speed in SDH by focusing on the following: spontaneous speech rates vs. speech rates on television, the explanation of the reading process, the reading rates of hearing and deaf people, as well as subtitle reading rates. Terminology and the evolution of practices are discussed, with a distinction made where relevant between interlingual subtitling and SDH, pre-recorded SDH and live subtitles, interlingual and intralingual SDH, as well as different types of target audience. All these

[16] See Chapter 3 for a discussion on different levels of reading skills amongst deaf vs. hard-of-hearing, children vs. adults and learners vs. proficient users of phonic languages, etc.

matters provide a basis for investigating editing and extra- and paralinguistic features, which are explored in the next sections of the thesis.

5.1.1 Speech rates vs. televised speech rates

The speed rate at which subtitles are presented onscreen is intrinsically related to two other speeds: the speed at which characters speak in audiovisual programmes and the assumed speed at which viewers read subtitles. First, spontaneous speech rates as well as speech rates in AVT programmes are examined in more detail.

Even though measurements and means of spontaneous speech rates have been established by researchers (Kelly and Steer 1949, Tauroza and Allison 1990, Wingfield *et al.* 2006), the fact that they vary greatly depending on the speed of articulating individual words and the pauses marking the delivery of the utterances (Rodero 2012) needs to be highlighted. The average speech rate for English speakers, given by Kelly and Steer (1949), is 159 wpm, though they add that the mean was set on the basis of a range that went from a minimum of 125 wpm to a maximum of 328 wpm. A later study conducted by Tauroza and Allison (1990) presents a higher average rate of spontaneous conversation, at 209 wpm, with extremes varying from a low 160 wpm to a high 260 wpm. A couple of decades later, Wingfield *et al.* (2006) came up with results closer to those given originally by Kelly and Steer (1949), stating that the speech rate in a conversation may be as low as 90 wpm, though on average falls within the boundaries of 140 and 180 wpm. Woźniak (2012: 556) defines the speed at which Polish is spoken as “the number of sounds spoken in a certain unit of time” (my own translation). On average this is between 10 and 12 sounds or four to five syllables per second in spontaneous speech (*ibid.*). This would amount to 240-300 syllables per minute. These are only approximations and may vary according to a multitude of socio-cultural factors, such as region, age, gender, ethnicity, etc., as well as utterance length and other interactional and discourse-related factors (Kendall 2009) to mention only a few.

Shevchenko and Uglova (2005) report that news programmes in the USA are shown at a standard speech-rate speed of 200 wpm. This figure accords with the results presented by Wingfield *et al.* (2006), who state that the speech rate in the news can reach up to 210 wpm. In the UK, the rhythm seems to be slightly lower. Lambourne (2006) reports that news and current affairs programmes are usually broadcast with a speech rate of 180 wpm, information that was also corroborated a decade later by Sandford (2015), who claims that BBC news programmes are normally presented at 175 wpm.

Television speech differs from spontaneous speech in the sense that to a large extent it is scripted, which usually means that it contains fewer pauses and repetitions, hesitations, anacolutha, etc. Indeed, as Gregory and Carroll (1978: 42) argue, films are "written to be spoken as if not written", which means that dialogue exchanges give the impression of spontaneous conversation even though they have been planned beforehand. This is also referred to as 'prefabricated orality' (Chaume 2004a). Unscripted speech is closer to everyday conversation (Remael 2008), but also undergoes various stages of planning (*ibid.*). Unscripted dialogues or monologues occur in reality shows, sports transmissions, etc., whereas semi-scripted programming might include interviews, news bulletins or current affairs programmes. All the above shows that speech on television is usually more polished than is spontaneous conversation. This information is significant as far as subtitling is concerned, as the less scripted the speech the more editing might need to be applied in order to produce coherent sentences in subtitles, which in turn affects the comfort of the reading.

Subtitling speed rates, especially in the case of verbatim subtitling, depend on televised speech rates. A good presentation of the interrelation that exists between televised speech rates and subtitle speed rates is given by De Linde and Kay (1999: 46). In a study conducted in 1994, they analysed a sample of 262 subtitles recorded from various British television channels and representing six different audiovisual genres (see Figure 29):

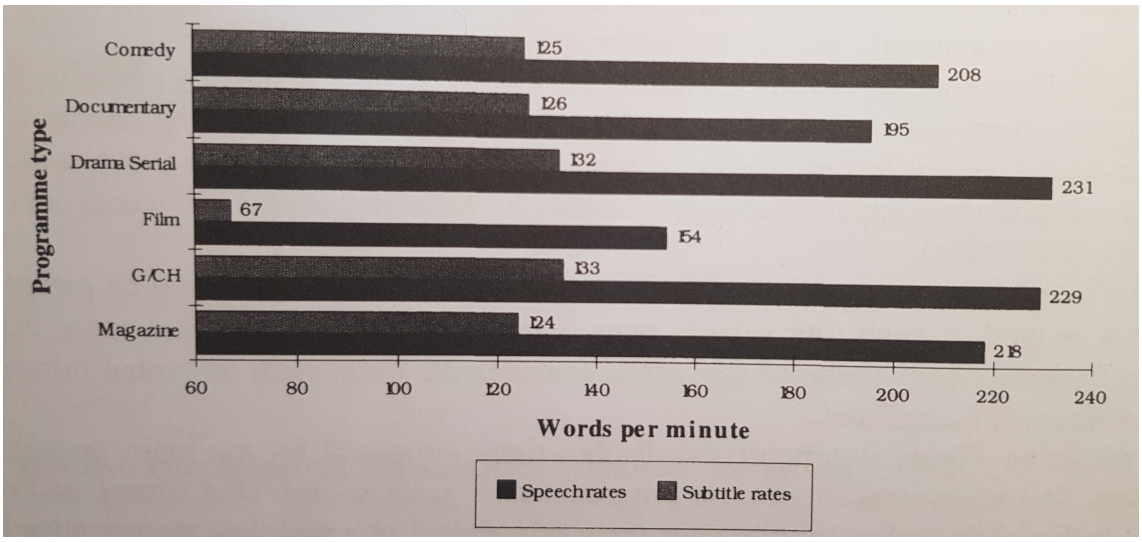


Figure 29: Speech and subtitle presentation rates (de Linde and Kay 1999: 46)

They showed that “the average subtitle display time was 43% less than speech time” (*ibid.*: 46). Figure 29 shows visually how much subtitles were edited in comparison with the speech rate in the selected programmes (the subtitle speed is the bar above the speech rate bar). The amount of editing ensured that the subtitle rates were within the recommendations of providers, that is to say between 110 and 140 wpm (ITC 1993, BBC 1994 in De Linde, Kay 1999).

In 2015, a BBC research team conducted a study where perceived rates of subtitling by deaf and hard-of-hearing people were measured with slow, medium and fast speeds and the participants were asked to rate the subtitle speed as too slow or too fast, as well as evaluating their enjoyment. The researchers also stated that they allowed the participants to set the volume as high or low as they would do at home. They all watched clips with scrolling (appearing on the screen word by word) or block (appearing on the screen as a whole) subtitles. This showed that “the perceived rate of subtitles for frequent users tends to align with those of speech for the hearing” (Sandford 2015: 7). Moreover, the researchers concluded that subtitle speeds should depend on the content of the programme, that is to say, whether, if a programme was fast, faster subtitle speeds could be used and whether viewers felt comfortable watching the subtitled content. The ramifications of the study were that subtitles should be created at the speed of speech and according to a particular programme (*ibid.*). The research project was, however, highly critised by

academics from the field of audiovisual translation and specifically accessibility to the media, as lacking in scientific rigour and containing a number of flaws. In a letter addressed to the BBC Research and Development team, academics stated that BBC researchers had disregarded many previous studies on subtitling speed, subtitling reading, comprehension and enjoyment. Moreover, they questioned the methodology of BBC research project (absence of comprehension and visual perception measures) and referred to the lack of important information on the participants, such as their hearing status or education, factors that had been shown to influence watching subtitled materials. In general, the academics called for the decision and policy makers to disregard the results of the study by the BBC and requested that the BBC research team would take into account numerous previous papers on the subject and conduct research built on rigorous methodology.

5.1.2 Reading process (static text and subtitles)

Before analysing the reading rates of the target viewers, a brief review of the reading process (static vs. dynamic text) is presented in order to offer a deeper understanding of the phenomena influencing people's reading speeds and abilities.

Initially, when studying the reading process, it was believed that reading printed text takes place in a linear form (Javal 1878 in Wade 2009). It was Javal's student, Lamare, who first described the eye movement during reading in the form of saccades, that is to say "rapid changes in accommodation during reading" (Wade 2009: 3), thus rejecting the continuous character of reading printed text. The typical eye movement while reading static text consists of saccades (rapid jumps from location to location) and fixations, (the periods when the eye remains stable for about 250 milliseconds (Rayner *et al.* 2012)). Figure 30 below shows the saccades and fixations of an average reader. The lines represent the movement of the eyes. The fixations take place just to the left of the middle of most key words (shown by the beginning and end of each curve). The arrows represent the direction in which eyes follow the text.

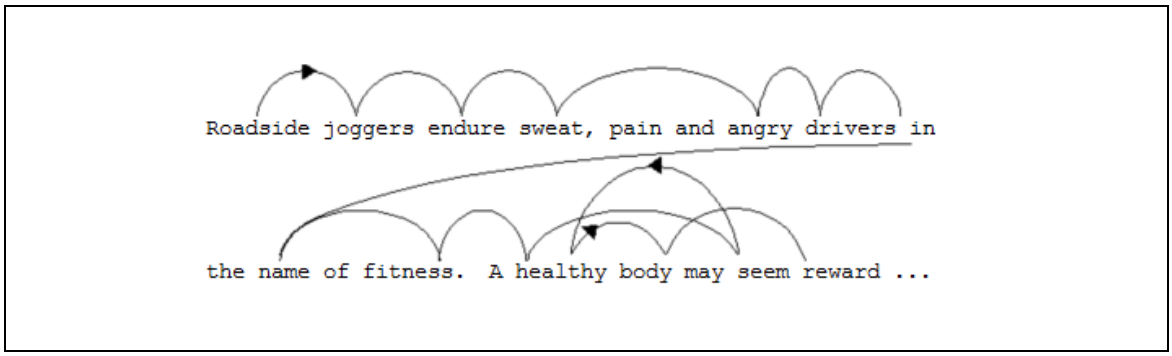


Figure 30: Eye movement while reading printed text (saccades and fixations) (Larson 2017: online)

When reading English, most saccades move forward for about seven to nine letters, whilst about 10% to 15% of saccades move backwards (Larson 2017). These are called regressions and tend to take place in order to re-read a word (Booth and Weger 2013). In general, fluent readers make fewer fixations and regressions, and their eye movements tend to be much more regular than those of people with less reading fluency (Król 1982 in Andrychowicz-Trojanowska 2016).

Nowadays, in the era of digitisation and transmission of information via screens, reading behaviour often follows non-linear patterns. Indeed, we tend to 'jump' around the screen to scan it in search of meaningful information, making reading a much more interactive activity (Mangen and van der Weel 2016). However, reading printed, static text differs substantially from reading subtitles – a dynamic text that is intermittently displayed onscreen against moving images and supported by sound in the form of dialogue and sound effects (Kruger *et al.* 2015). In this sense, it can be argued that subtitles are always in competition with moving images (*ibid*.). In the case of people with hearing problems, understanding how they process watching subtitled materials, where dynamic text serves as a replacement of dialogue exchanges and sound effects, is crucial for improving the quality of accessibility services. When watching audiovisual productions, hearing people process visual and verbal auditory input at the same time. In the case of SDH, however, "verbal and visual information can no longer be processed simultaneously; instead they have to be processed in succession" (De Linde and Kay 1999: 17), as the verbal auditory signs become verbal-visual. In the latter scenario, as in the case of reading

interlingual subtitles, the viewers' attention is divided between watching the images and having to read the subtitles in order to follow the plot (*ibid.*).

In addition, unlike reading printed text, reading subtitles is constrained by subtitle display times. Even though viewers can control the audiovisual material to a certain extent by pausing, rewinding and the like (for example on DVD, VOD and catch-up television) the typical viewing process is continuous in nature, just like watching live television (Kruger *et al.* 2015), which means that there is much less time to go back to re-read missed information.

One of the most popular biometric tools to analyse reading behaviour is eye tracking (Rayner 1998). This is mentioned here only to indicate its potential effect on researching subtitle reading behaviours both in hearing and deaf audiences. Eye tracking has already been adopted as a method by many audiovisual translation scholars around the world (Perego 2012, Kruger *et al.* 2015, Szarkowska *et al.* 2011, Cambra *et al.* 2014, Mangiron 2016). It is of note, though, that when eye tracking is applied to studying the reading of subtitles, it can pose certain challenges. At the moment, the available software does not recognise subtitles as a text, but rather as part of the image. Researchers need to create so-called areas of interest around each subtitle in order for the software to detect the way in which people look at subtitles. Most studies therefore tend to concentrate on attention allocation in watching subtitled programmes, or are qualitative in nature (Kruger and Steyn 2013).

What stands out in eye tracking studies on subtitling is the fact that the reading of subtitles is an automatic behaviour (d'Ydewalle *et al.* 1991) as they always draw the viewers' attention, who look at them as soon as they appear on the screen (d'Ydewalle and de Bruycker 2007). Moreover, people read subtitles whether they are in the language of the viewers or in a foreign language (Koolstra *et al.* 1999, d'Ydewalle and de Bruycker 2007). D'Ydewalle and de Bruycker (2007) were the first scholars to examine the actual reading of subtitles rather than just looking at them. They demonstrated that children and adults both exhibited a more regular reading behaviour when watching foreign films with subtitles in their native language than when exposed to reverse

subtitling, that is to say when the film is in their native language and the subtitles are in the foreign language. They also discovered that subtitles in the form of two lines, as opposed to one-liners, prompted more regular reading patterns. Kruger and Steyn (2013) devised a reading index for dynamic texts (RIDT), which allows researchers to measure to what extent participants read subtitles. The index is "the product of a number of unique fixations per standard word in any given subtitle by each individual viewer and the average forward saccade length of the viewer on this subtitle per length of the standard word in the text as a whole" (*ibid*.: 110).

$$\mathrm{RIDT}_{vps} = \frac{\text{number of unique fixations for } p \text{ in } s}{\text{number of standard words in } s} \times \frac{\text{average forward saccade length for } p \text{ in } s}{\text{standard word length for } v}$$

Figure 31: The formula for the Reading Index for Dynamic Texts (RIDT) (Kruger and Steyn 2013: 110)

The result is specific to the video (v), the participant (p) and the subtitles (s) used.[17] The ramifications of the study are fairly significant in the sense that uthe index now allows for measuring the impact of reading the text in subtitles.

5.1.3 Reading rates

This section discusses the assumed reading rates of people depending on the nature of the text (static vs. dynamic), the type of audience (hearing vs. deaf) and the type of subtitling (standard vs. SDH, live vs. pre-recorded and intra- vs. interlingual SDH).

[17] For a more detailed explanation, refer to Kruger and Steyn (2013).

5.1.3.1 Static text reading rates

As Romero-Fresco (2015) notes, the term 'reading speed' comes originally from psycholinguistics where it is applied to measuring the reading of static texts. In essence, it is the speed at which a person is able to read a text and reach "a previously established comprehension result" (*ibid*.: 336). Samuels and Dahl (1975) have found that an average speed of proficient readers in English is 291 wpm (461 wpm when reading for a general overview only). Similarly, Rayner *et al.* (2012: 163) report that "a skilled reader reads between 250 to 350 wpm", with slow readers hovering around the 200 wpm mark (Rayner *et al.* 2010). In Polish, the reading speed of an average person is about 250 wpm (Okularczyk 2012: 3 in Andrychowicz-Trojanowska 2016), referring to skilled readers of a text in their mother tongue.

Reading rates depend on text difficulty and the purpose of reading. "The rate one chooses for reading is selected on the basis of the interaction between these two variables. Thus, rate should change as one varies these functions" (Samuels and Dahl 1975: 43). Similarly, Rayner (1998) reports that the reading rate drops as the text gets more difficult. In eye tracking terms this is demonstrated by longer fixations and shorter saccades, which would suggest subjects focus more on words, and testifies to an increase of regressions, that is to say going back to re-read words.

There are many more factors to consider (see Section 3.3.2) with regard to d/Deaf and hard-of-hearing people. Research has shown that many congenitally deaf people are poor readers (Schirmer and McGough 2005, Antia *et al.* 2009, Mayberry *et al.* 2011, Albertini and Mayer 2011, Qi and Mitchell 2012).

Hearing status also influences performance in terms of reading subtitles, as explained in more depth below in the following section, with deaf and hard-of-hearing viewers achieving lower results (Stewart 1984, Burnham *et al.* 2008), which are manifested by longer fixations, higher fixation count and longer dwell time in the subtitle area (Szarkowska *et al.* 2011).

5.1.3.2 Subtitle (dynamic text) reading rates

Speed in reading interlingual subtitles is affected by "the level of literacy of the target audience, the viewers' degree of familiarity with the programme language, the genre of the subtitled programme and the pace of the visuals" (Ivarsson and Carroll 1998: 65). The current section analyses subtitle reading rates from a conceptual and historical point of view. First, terminology issues are explained, and then a synopsis of the evolution of subtitle reading practices is given.

Terminology

With regard to the speed of subtitles, 'reading speed' is a generally used term. Nevertheless, this is confusing as a subtitler setting the maximum reading speed in the software does not set the viewers' average reading rate, but the maximum speed that should not be exceeded. The programme will then display the rate of presentation for the subtitles onscreen, and a warning in red will usually indicate that the maximum rate has been exceeded. Viewers then need to match their reading speeds to the subtitle display rates, which will vary according to the speed at which the characters on screen are speaking. As Romero-Fresco (2015) emphasises, with the use of this terminology the focus passes from the reader to the subtitler, so that a more adequate term would be 'subtitling speed'. Nowadays more and more often the term *reading speed* is swapped either for 'subtitling speed', 'expected reading speed', 'subtitle display rate', or 'subtitle presentation rate' (Pedersen 2011, Sandford 2015,[18] Szarkowska *et al.* 2016). Some subtitling software companies – EZTitles for instance – still refer to *reading speed*, as shown in Figure 32 below:

[18]www.bbc.co.uk/rd/publications/whitepaper306

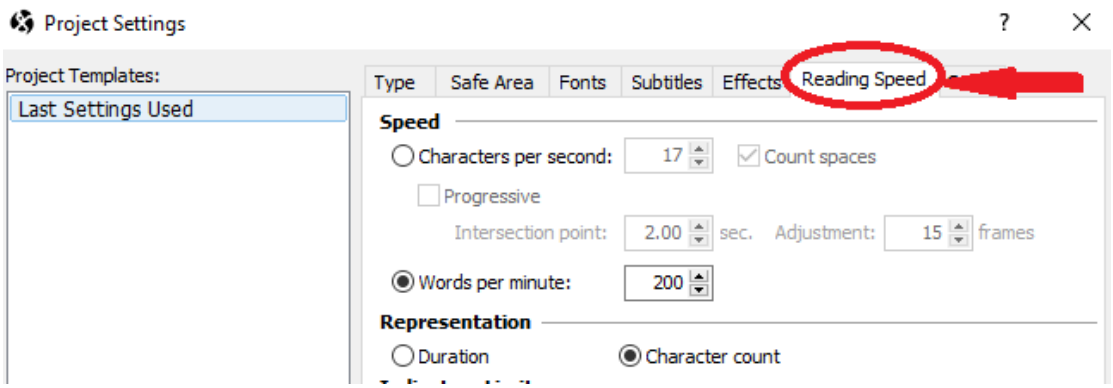


Figure 32: EZTitles subtitling software

Others, for instance Wincaps Qu4ntum, have started to introduce more accurate terminology, as illustrated in Figure 33:

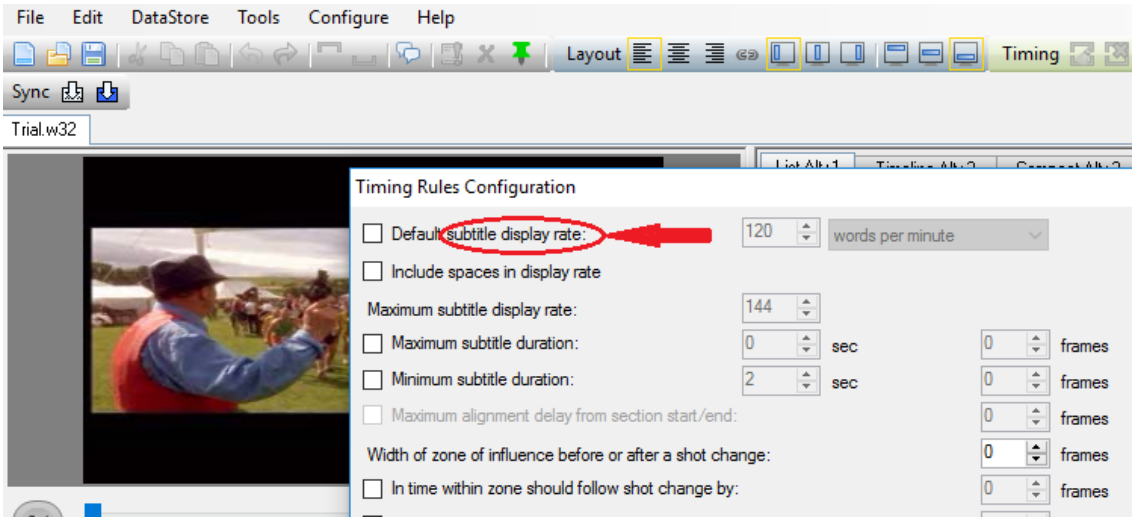


Figure 33: Wincaps Qu4ntum subtitling software

In this thesis, the following terms are used interchangeably: subtitle/subtitling speed, and subtitle presentation/display rate.

As Romero-Fresco (2015) notes, subtitling speed refers to the speed at which subtitles are presented. When we shift the focus to viewers, who not only read subtitles but also devote some of their attention to watching images, the notion of 'viewing speed', as proposed by the researcher is more appropriate (*ibid.*). The results of the DTV4All project, where 103 hearing, hard-of-hearing and deaf participants in six different countries (England, Poland, France, Spain, Italy and Germany) watched 71,070 subtitles, showing that the subtitling speed of 150

wpm allowed viewers to spend the same amount of time on reading subtitles and watching images. When subtitles were faster (reaching 200 wpm), viewers spent less time watching the images. In the case of slower subtitles, the slower their display rates the more time was left for watching the images, as illustrated in Figure 34:

Viewing speed	*Time on subtitles*	*Time on images*
120wpm	±40%	±60%
150wpm	±50%	±50%
180wpm	±60%-70%	±40%-30%
200wpm	±80%	±20%

Figure 34: Viewing speed and distribution of gaze between subtitles and images (Romero-Fresco 2015: 338).

The research showed a pattern similar to the results of the study conducted by Jensema *et al.* (2000) with deaf viewers, when the researchers tried to determine the time spent on viewing captions as opposed to watching video images. The results suggested that there was a correlation between higher subtile speeds and viewers' time spent looking at the subtitles (*ibid.*).

The subtitle presentation rate is usually measured in words per minute (wpm) or characters per second (cps). Languages that typically have longer words, such as German, might seem to have longer subtitles when the presentation rate is measured in words per minute, whereas languages with a majority of short words, such as English, might appear to have shorter subtitles but the same subtitle speed. When we apply this measurement, people reading the subtitles in Germany will read more text in the same amount of time. For instance, 180 wpm would equal 21 cps in German and 15 cps in English (Díaz Cintas 2008: 97 in Romero-Fresco 2015). The measurement in wpm is therefore less adequate than cps when comparing subtitle display rates between languages.

Even though most subtitling programs offer the option of converting wpm to cps and the other way round, Martí Ferriol (2013) found that, owing to different

algorithms used by the subtitling software producers, reading parameters differed, as illustrated in Figure 35:

	Subtitle	Time in/out	Duration	Number of characters	WinCaps	Swift	Spot
1	– What's up? – Bad news …	00:00:45:12 / 00:00:47:21	2:09	12 / 13	8 cps / 106 wpm	9 cps / 101 wpm	11 cps
2	My contact said the Jews who showed up with the green slip were arrested.	00:00:50:10 / 00:00:54:13	4:03	35 / 37	14 cps / 174 wpm	15 cps / 203 wpm	18 cps
3	That's better…	00:01:04:09 / 00:01:05:12	1:03	16	13 cps / 160 wpm	13 cps / 107 wpm	14 cps
4	– What's wrong? – It's his father.	00:01:29:15 / 00:01:31:15	2:00	15 / 18	14 cps / 168 wpm	14 cps / 149 wpm	18 cps
5	You're very pretty, miss.	00:01:51:13 / 00:01:53:20	2:07	25	9 cps / 115 wpm	9 cps / 105 wpm	11 cps
6	– Excuse me. – Yes?	00:02:39:04 / 00:02:40:16	1:12	12 / 6	10 cps / 121 wpm	121 wpm	14 cps
7	Have you got a light?	00:02:42:02 / 00:02:43:18	1:16	21	10 cps / 124 wpm	182 wpm	13 cps
8	Of course.	00:02:43:23 / 00:02:44:23	1:00	10	9 cps / 108 wpm	119 wpm	10 cps

Note: This table is only a part of a bigger one which was set up by Beatriz Cerezo Merchán at the Universitat Jaume I (Castelló, Spain) in 2010.

Figure 35: Comparison of reading speed parameters calculated by different subtitling programs (Martí Ferriol 2013: 410)

According to Martí Ferriol (2013: 411), "it seems [that] the simple process of counting characters and dividing the resulting number by the subtitle duration must be somehow implemented in a different way in these programs". Such varied results led the scholar to come up with a macro that would arrive at a subtitling speed based on a simple mathematical procedure, namely to calculate the subtitle duration by deducting the in-time from the out-time and counting the characters for each subtitle, then dividing the result of the latter by the result of the former: "as far as words [sic], the piece of logic has been programmed to consider a "word" as any set of alphanumeric characters preceded and followed by a blank character" (*ibid*.: 412). This tool makes calculating reading speeds in cps and wpm faster with more precise figures.

In his study on the diachronic analysis of DVD subtitle speeds Gonzáles-Iglesias (2011) gives measurements in cps, stating that it is more precise, rather than wpm, where a word is usually, but not always, understood as a string of five characters plus a space between the current word and the following word.

The data needed for calculating the speeds is analysed in Excel, where formulas can be created to count the number of characters in each subtitle, each subtitle presentation speed, as well as the average subtitle speed in a film. The same approach has been adopted in this thesis when analysing subtitle speed in Polish SDH over the years (see Chapter 6).

Evolution of practices

This section concentrates on different approaches to subtitling speeds that have developed over the years. First, the speed in interlingual subtitling is presented, followed by presentation rates in SDH. Any distinctions between pre-recorded SDH and live subtitling, as well as interlingual and intralingual SDH, are also taken into account.

Speed in interlingual subtitling

A vast majority of subtitling professionals refer to 'the six-second rule', which was popularised after "considerable discussion about display times for subtitles" (Luyken *et al.* 1991: 44) at the EBU Conference on Dubbing and Subtitling that took place in Stockholm in 1987. The participants agreed that the ideal exposure time for a two-line subtitle, containing an average of 35 characters in each line, was 6-8 seconds and, for one-line subtitle, 4 seconds. The same conclusion was reached by d'Ydewalle *et al.* (1987) after their study on reading a message when the same message was available aurally in another language. Participants were given 4, 6 and 8 seconds to read a two-line subtitle of 64 characters in total or a one-liner of 32 characters. According to the results, it was easiest for the viewers to read the two-liners in 6 seconds. The experiment involved interlingual subtitles displayed with no sound, so that the viewers would need to read the subtitles in order to follow the plot. In his guidelines for TV subtitles, Karamitroglou (1998) also recommends a maximum of 6 seconds for reading a full two-line subtitle, 5 ½ seconds for reading two lines with 14-16 words in total plus ¼ to ½ second for the brain to process the fact that the subtitle has appeared on screen, though there is no reference to the research according to which these conclusions were reached. The researcher reports

that the average reading rate of subtitles is 150-180 wpm, or 2 ½ to 3 words per second. These approximations are valid for 'average' viewers (14-65 year olds, from an upper-middle socio-educational class) (*ibid.*). However, it should be pointed out that these evaluations must have been done for English viewers only, as three words in German might take a full two-line subtitle.

Subtitle display rates in television seem to have been continuously increasing with the passage of time. As Ivarsson and Carroll (1998: 66) note, "subtitle speed in most countries nowadays is much faster than it was 30 or 40 years ago". Pedersen (2011) reports similar findings. In the 1980s the expected reading speed in Sweden was between 7 and 10 cps, in Norway 7-12 cps, and in Denmark 9-12 cps. In the 2000s it had risen to 10-14 cps in Sweden, 12 cps in Norway and 10-14 cps in Denmark. It should also be added here that the maximum number of characters per line was 28-32 characters in the 1980s, whereas in the 2000s it had gone up to 35-37. Equally, with a higher speed, the maximum subtitle exposure time has been reduced, in the case of some companies, from 6 seconds – valid in the 1980s – to 5 or even 4.5 in the 1990s in countries like France (Becquemont 1996 in Díaz-Cintas and Remael 2007) or Denmark, where, as Gottlieb (2001) notes, a full two-line subtitle can stay on the screen for 5 seconds (based on 12 cps speed), though this would make for rather short lines of a maximum of some 30 characters per line (i.e. 60 characters in the 5 seconds that it appears on screen). Nowadays, most European countries create subtitles with faster presentation rates, mostly with a minimum of 1 second and maximum of 4 seconds (Georgakopoulou 2003).

Companies adjust the presentation rates to take into account the target audiences and the linguistic nature of the audiovisual programme, with lower rates applied to programmes aimed at older people (*ibid.*) or children. One of the studies analysing subtitle display times for children showed that, when they were presented with a full two-line subtitle of 64 characters, 10 seconds was the preferred time for optimal performance (Koolstra *et al.* 1999). However, the results were not significantly different from the other conditions when 6 and 8 seconds were allowed for reading a two-liner of 64 characters. The participants were two, four and six graders watching American clips with Dutch subtitles.

This research demonstrates that the ‘six-second rule’ can also be applied when creating interlingual subtitles for younger audiences.

Another issue to consider is the media channel. It was observed that people read subtitles 30% faster on a cinema screen than on a television set (Ivarsson and Carroll 1998). The reasons for this included better visibility and legibility of subtitles as well as the profile of the cinemagoers, who were faster readers and used to absorbing information fast. Most subtitling companies claim, though, that subtitle presentation times do not change according to the medium in question (cinema, DVD, etc.) (Szarkowska 2016b). In its survey on subtitle presentation times and line breaks in interlingual subtitling (*ibid.*), only one company stated that reading speed guidelines were stricter for streaming clients, and one reported that subtitles for the cinema had slower rates than TV and DVD subtitles (*ibid.*), contrary to what was claimed by Ivarsson and Carroll (1998). The subtitling companies taking part in the survey claimed that average presentation times varied between 10 and 20 cps, with maximum line lengths of between 37 and 42 characters. The results from the survey for subtitlers conducted by Szarkowska (2016a) with 237 people from 27 different countries reveal that the most popular presentation rates are: 10, 12, 15, 16 and 17 cps, and 160, 180 and 200 wpm. Figure 36 shows different subtitle display rates according to the various countries canvassed:

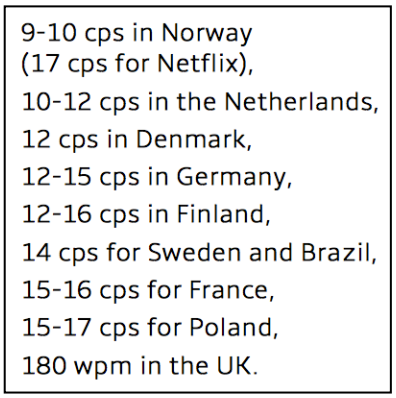


Figure 36: Subtitle presentation rates depending on country (Szarkowska 2016a: 8)

In terms of the maximum number of characters per line, the subtitlers[19] reported that the most frequent ranges hovered between 37 and 42 characters for alphabetic script, with the maximum number of characters reaching 45-50 (Szarkowska 2016a). This shows that, nowadays, an increasing number of companies use more characters per line, which means that viewers are expected to read more text in the same amount of time.

Regarding the changes in subtitle presentation rates over the years, the results of the survey amongst subtitling companies carried out by Szarkowska (2016b) show that they either stay the same (reported by a few companies) or they have gone up, as stated by the others. When taking the subtitlers' opinions into account, 85 claimed that the presentation times had not changed, 74 reported that they had gone up and 19 argued they had gone down (Szarkowska 2016a).

Speed in SDH

Initially, the commonly held belief was that accessible programmes meant lowering the speed of subtitles as much as possible in order to cater for everyone with hearing problems, including those whose reading skills were very limited (Jensema and Burch 1999, *Baker at al.* 1984). An average speed of 120 wpm was generally used (Hutchins 1993 in Jensema and Burch 1999).

One of the first studies on the speed of television subtitles was conducted by Jensema and his colleagues in the USA in 1994 and then published in 1996 in the *Annals of the Deaf* (Jensema *et al.* 1996). Based on the analysis of 183 programmes (about 180 hours of video), the average display rate for subtitles on American television at that time was established at 141 words per minute or 736 characters per minute (i.e. just over 12 cps). The research also revealed that scrolling captions had higher speeds than block captions with 151 wpm and 138 wpm respectively. The slowest captions were provided for sports and music programmes (106 wpm and 107 wpm) and the fastest were the captions used in talk shows, with a mean speed of 177 wpm and one programme reaching as

[19] Subtitlers taking part in the survey came from 27 countries, both inside and outside Europe.

high as 231 wpm. Captioning for children proved to be faster than expected with an average speed of 126 wpm (*ibid.*).

Following his study on the speed of television subtitles, Jensema (1998) tried to determine viewers' reactions to different presentation rates. After watching a short excerpt the participants were asked to specify whether the captions were too fast, fast, OK, slow or too slow. There was also a more detailed description of the choices available, for example "Fast: captions should be slower. Captions should be on the screen a little longer" (Jensema 1998: 320). The most comfortable speed turned out to be 145 wpm, which was very close to the speed already being used on television.[20] The last study and the final report published by Jensema and Burch (1999) revealed, however, that caption viewers were still able to understand information from semiotically composite clips and draw their own conclusions even when the subtitle presentation rate reached 220 wpm. One of the major drawbacks of this experiment was the fact that the materials selected for it were quite short (30 seconds each), which meant that the audience might not perform that well when watching audiovisual materials for longer periods. What is interesting here is the fact that deaf, hard-of-hearing and hearing viewers obtained very similar results. Even though people with hearing issues might be slower readers, hearing audiences were not used to reading captions, scoring the same in the after-study tests. The most significant corollary for this research is that, for short periods, viewers are able to understand information from captions and images with a subtitle display rate of up to 220 wpm (*ibid.*). This does not mean that the participants were comfortable with accessing such subtitles, but they were still able to perform relatively well from a comprehension point of view. It should be pointed out that another of the limitations of the study was the nature of the chosen videos, which were recorded by a camera moving across a poster with a selected topic. The information given in the subtitles was related to, though not exactly the same as, what was seen on the screen. This set up was rather an unnatural

[20] The study also showed that hearing people who were not used to watching television with captions preferred a slower reading speed.

one, as usually viewers 'jump' between the text and the images to double check the information. As discussed above, subtitles are not read in a linear mode, and this is often carried out in an individual manner (Ofcom 2005).

Burnham *et al.* (2008) conducted a study amongst deaf and hard-of-hearing adults where they tried to manipulate presentation rates and text reduction independently. In the experiment, which analysed the effects of caption rates on content comprehension, readers with different levels of proficiency were exposed to subtitles projected at 130, 180 and 230 wpm. Amongst the deaf participants, proficient readers performed better at 130 and 180 wpm. Amongst the hard-of-hearing, on the other hand, the less proficient readers scored best, most surprisingly, at 230 wpm, whereas more proficient readers performed better at 180 wpm, as we can see in Figure 37 below:

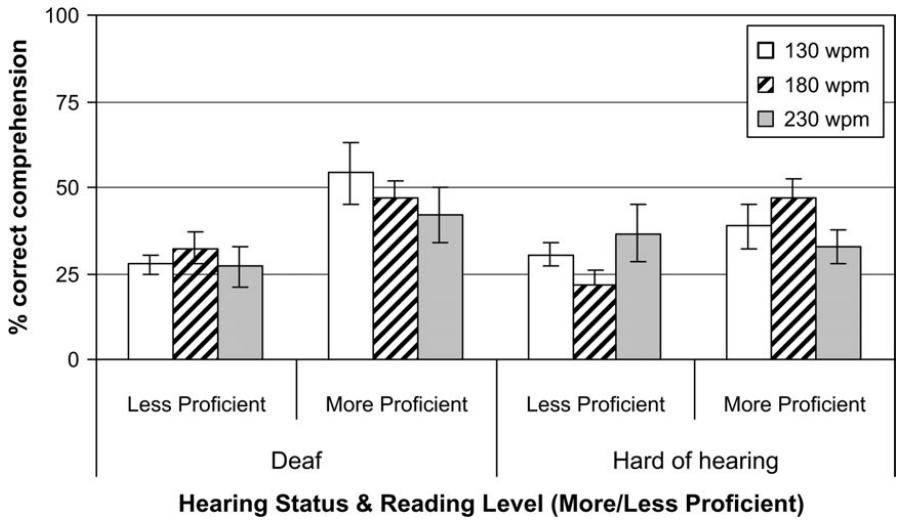


Figure 37: Comprehension scores for deaf and hard-of-hearing readers (Burnham *et al.* 2008: 369)

In the UK, *The Handbook for Television Subtitlers* written by Baker *et al.* and published in 1984 states that the subtitle speed should not exceed 120 wpm. According to the information given in the ITC guidelines (1999) produced over a decade later pre-recoded programmes should not exceed 140 wpm, but in some special circumstances they could reach 180 wpm (or 15 cps). The same instructions were recommended by the BBC guidelines (2009), and in the updated version (BBC 2018b), the recommended rate is 160-180 wpm. In practice, however, the average subtitle presentation rate is 160 wpm for pre-

recorded programmes (Ofcom 2005). The researchers for Ofcom (*ibid.*) claim that, as viewers with hearing problems have been using subtitling for over 20 years now, they are more accustomed to reading subtitles and are therefore able to cope with higher speeds. This also correlates with higher levels of literacy amongst deaf and hard-of-hearing people. Indeed, following a reception study as part of the DTV4All research project that was conducted in the years 2010-2013, UK respondents were happy with the speeds of the subtitles that were generally not higher than 180 wpm (Romero-Fresco 2015). Their overall satisfaction with the subtitling speeds applied to television as well as DVD formats. It is important to note, though, that there are many factors affecting the preferences as regards higher or lower subtitle presentation rates (Ofcom 2005), namely:

- Means of communication among participants (sign language or oral language), as users of Sign Language might rely more on signing on television and therefore be less proficient readers of subtitles.
- Experience in accessing subtitled materials: those who watch subtitled television on a regular basis, and those who have watched it for about 5 years, are more fluent readers of subtitles and are able to adjust to faster speeds better.
- Literacy levels: the better the reader of subtitles the more proficient the viewer. Also, people below 54 years of age and those that use computers on a regular basis seem to be able to adapt better to higher speeds.
- Quality of subtitles: subtitles with spelling mistakes, poor sentence structure, careless line breaks etc. are difficult to follow and need revisiting; otherwise the process of reading them is slower.
- Familiarity with the programme genre: documentaries that make use of specialist vocabulary might be more difficult to follow than a well-known soap opera with a more colloquial style.
- Type of programme: with fast or slow speech, less or more action, etc. Viewers more accustomed to a certain type of programme, for example a soap opera, and know the characters etc. are better able to manage higher speeds.

All of these factors should be taken into account when adjusting subtitle presentation rates for viewers with hearing impairments, be it on television or other media channels, and when dealing with specific audiovisual material. An interesting finding comes from Ofcom's (2005) research into subtitling speeds, which was based on people's opinions of how able and how comfortable they were with different speeds. In this study, it was found that people struggled to understand and explain subtitle presentation rates in words per minute, the most widely used unit of measurement in English speaking countries, but rather interpreted it through "number of lines of text on screen" (*ibid.*: 13). Given this ambiguity, two new ways of measuring speed have been suggested: words per scene/frame or lines per scene/frame (*ibid.*). The study also highlights the hierarchy of deaf and hard-of-hearing viewers' needs and wishes (see Figure 38). Once their basic requirements were satisfied, viewers were then happy to address the issues related to the speed of subtitles:

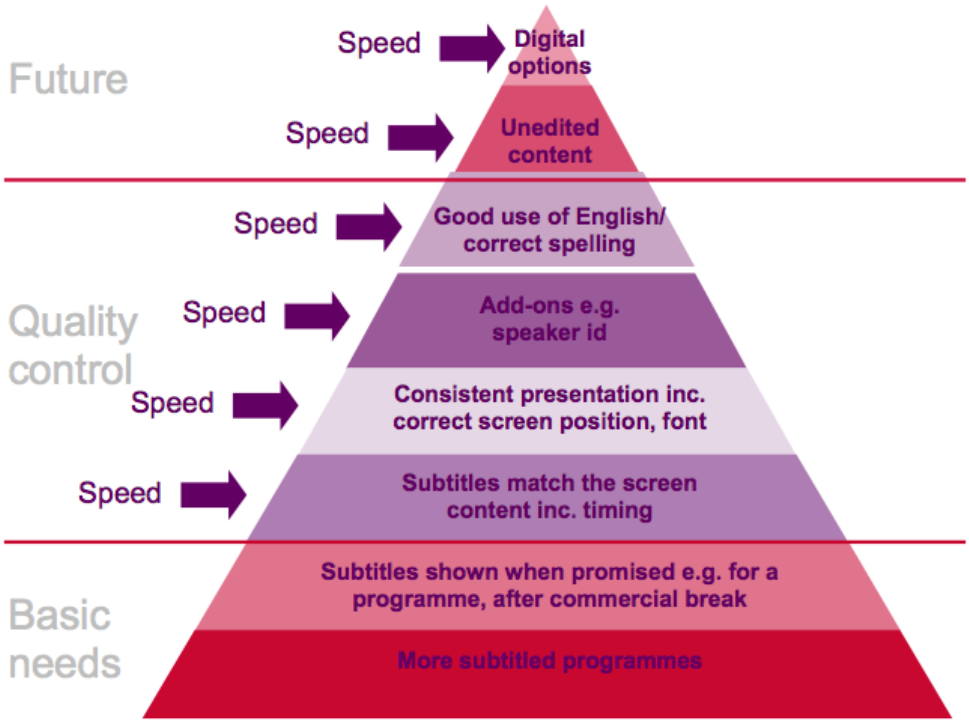


Figure 38: Hierarchy of subtitling needs (Ofcom 2005: 16)

As noted above, the current subtitle presentation rates for pre-recorded programmes are generally manageable for the majority of people with hearing impairments in the UK (Ofcom 2005, Romero-Fresco 2015).

In Poland, subtitlers worked initially with a speed of 12 cps, or allowing 3 seconds per 37-38 character line (Künstler 2008). Nowadays, presentation rates remain largely the same. The National Broadcasting Council in Poland, the country's regulator for broadcasting services, recommends using speeds not higher than 12 cps in subtitles aimed at deaf and hard-of-hearing viewers (KRRiT 2016), which is in line with traditional practices. As in the UK, the Polish deaf and hard-of-hearing are satisfied with the speed of television subtitles (Szarkowska *et al.* 2015a). The majority of participants were also happy with the subtitling speeds offered on DVDs. It is of note here, however, that in Poland DVD subtitles or subtitles for films screened at festivals are shown with higher speeds, often reaching 180 wpm (about 17 cps). In addition, Netflix recommendation for Polish SDH is 20 cps for adult programs and 17 cps for children's programs.

Younger audiences

Studies in the 1980s and the 1990s (Baker 1985, Gregory and Sancho-Aldridge 1996, De Linde and Kay 1999) showed that younger audiences benefited from subtitles with lower presentation speeds than those aimed at adults. Baker (1985) suggested that the optimal subtitling speed for children should be at 60 wpm. However, Braverman and Hertzog (1980) claimed that there was no significant difference in comprehension amongst primary and secondary school children in the USA when the subtitles rates were set at 60, 90 or 120 wpm. In their opinion, it was the language used in the subtitles rather than their display speed that affected comprehension. In Australia, Tyler *et al.* (2009) studied the reception of subtitles by better and poorer deaf readers studying at a deaf school. The children watched clips at 90, 120, and 180 wpm. They showed that children performed better when reading captions at the lower speeds of 90 and 120 wpm rather than 180 wpm, and there was no significant difference between 90 and 120 wpm. On the other hand Cambra *et al.* (2015)'s empirical study

concluded that even subtitles shown at the speed of 53 wpm posed some comprehension challenges for children aged between 7 and 10. All this research was extremely valuable as it has been able to feed into the guidelines in different countries, and as a result filter down into actual practice. In the USA, the guidelines in the Captioned Media Program (2006) called for up to 160 wpm as the maximum subtitle display rate for children. The first study on the subtitle rates of television programmes conducted by Jensema (1996 *at al.*) revealed that the average speed for children's programmes was 126 wpm. A study by Fresno (2018) on subtitle presentation rates on American television for children showed a 19 wpm increase in the rate, currently averaging at 145 wpm. In the UK, ITC guidelines from 1999 (later adopted by Ofcom) recommended a speed of 70-80 wpm for pre-lingually deaf children. In their updated guidelines, the BBC (2018) does not specify the ideal subtitle speed for children's programmes, but say they should follow the speech of the characters. Professionals (Künstler and Butkiewicz 2012) note that people learning Polish phonic language, a group that includes children, should be presented with speeds between 9 and 12 cps. The rather general guidelines provided by the National Broadcasting Council (KRRiT 2016) do not mention the speeds for subtitles intended for younger audiences.

Interlingual SDH

SDH is usually provided to accompany national programmes shot in the language of the target audience, which would show why intralingual, rather than interlingual, captioning, is the subject of more research. However, this is not to say that interlingual SDH should not be given more attention, as indeed deaf and hard-of-hearing people should have access to foreign films with subtitles that are appropriate for viewers with hearing problems. Nevertheless, there are significantly fewer audiovisual materials with interlingual SDH, especially in countries like Poland, where the amount of SDH is still unsatisfactory. This has led to scant research in interlingual SDH as far as display speeds are concerned. In her study on features of interlingual subtiting for the deaf and the hard-of-hearing, Szarkowska (2013) mentions that subtitling speed in interlingual SDH is normally equivalent to that used in intralingual SDH, that is

to say 12 cps in the case of Poland. In practice, this would mean editing out more text to lower the speed from the usual 15 cps found in interlingual subtitling, also bearing in mind that sound descriptions and labels need to be introduced.

Live subtitles

All the above information applies to pre-prepared subtitles used when working with pre-recorded programmes. The situation is very different as regards live programmes. When asked to give their opinions on live subtitles, most Polish respondents claimed that the subtitles were too fast (Szarkowska *et al.* 2015a). It should also be noted here that the participants were reporting on the use of semi-live subtitles used in Poland for daily news and similar programmes, where subtitlers prepare the subtitles in advance on the basis of an earlier received script and add any hot news items on the spot. Truly live subtitling is only beginning to take place on television with Polsat, a private TV station conducting pioneering work in this field. As already noted in Chapter 4, on 10 March 2017 Polsat took a big step forward and showed the popular *Taniec z Gwiazdami* [*Dancing with the Stars*] with live subtitles, using speech recognition software. As the service develops, it is hoped that more research and feedback from the viewers will become available. At the moment, examples of live subtitling practice from other countries can offer a point of reference to bolster production in Poland.

As real-live subtitling is well established in the UK, and there are a substantial number of programmes subtitled in this manner, Ofcom's focus is now turning away from assuring a certain percentage of subtitled hours on TV to guaranteeing that the quality of live subtitling is respected, which also includes respecting a maximum speed for subtitling.[21] A study conducted by Romero-Fresco (2009) in 2008 on the speed of respoken BBC subtitles revealed that,

[21] Other areas used to measure the quality of live subtitling are the delay between the delivery of speech and the appearance of subtitles on the screen, and the number and type of errors found in the subtitles (Ofcom 2015a).

whatever the speed of delivery of the source materials (sports, news, interviews, weather forecast), respeakers lagged behind on average by 16.3% in sports, 12.7% in news, and 20% in interviews and weather, as illustrated in Figure 39:

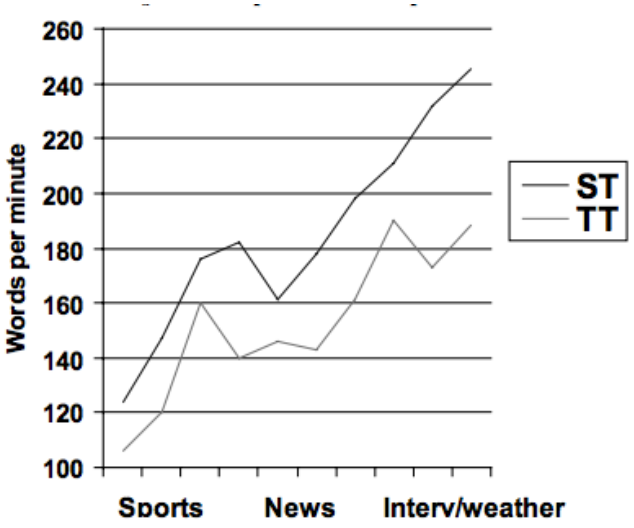


Figure 39: Source text speed and target text speed (Romero-Fresco 2009: 120)

Even though respeakers were capable of producing up to 190 wpm and were asked to provide verbatim subtitling, they still lagged behind the source text speakers for the sports and news, and omitted words. The reason for this was found to be due to the need to include punctuation marks in the subtitles, which have to be spoken out loud by respeakers, thus taking up more time. When we compare ST and TT speeds, including the verbalisation of the punctuation marks in both scenarios, the rates resemble one another more closely, as we can see in Figure 40:

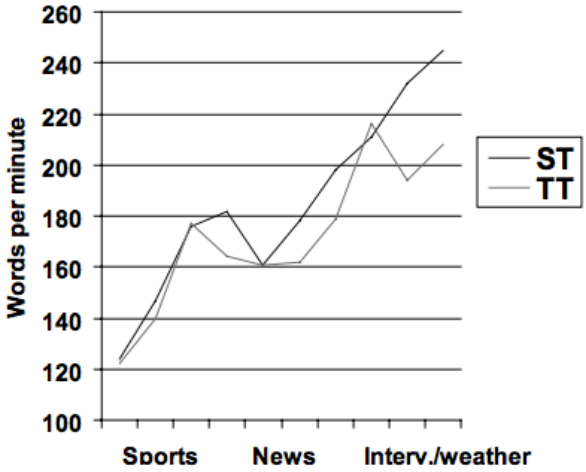


Figure 40: ST speed and TT speed including verbalisation of punctuation marks (Romero-Fresco 2009: 121)

In 2013, Ofcom initiated a two-year research programme to measure the quality of live subtitling on British television and, as a result, encourage broadcasters to take steps to improve their captioning services for deaf and hard-of-hearing viewers. Programmes targeted in the four sampling exercises – that is to say analysed every 6 months for 2 years – were news, entertainment and chat shows. The findings show that the subtitling rates in those samples were on average below 180 wpm, falling within the recommendations set originally by ITC (now Ofcom) for pre-recorded programmes. All the selected live television materials, however, had instances of rapid subtitling, that is to say where the subtitles reached 200 wpm and over. Specifically in the third sample for measuring the speeds of live subtitling, such high rates were present in an astounding 99% of samples (Ofcom 2015b). The highest instance of subtitles reaching such speeds was reported in news programmes, where current professional practice makes use of 'hybrid subtitles', namely a combination of block pre-prepared subtitles and scrolling live subtitles. In response to Ofcom's request to propose solutions to deal with these high speeds, which target audiences find very difficult to follow, broadcasters agreed that it does spoil the viewing experience, but at the same time they stated that limiting the rates to 200 wpm for live subtitling, the speed above which viewers struggled to keep up with reading subtitles, might result in bigger latencies and/or more editing (*ibid.*). More research is scheduled by the regulatory body to address this issue.

Subtitling speed is a very complex feature of SDH, as this section demonstrates. As they are closely related to natural speech rates and televised speech rates as well as to viewers' reading speeds, subtitle display times have a significant effect on the comfort of deaf and the hard-of-hearing audiences when accessing audiovisual materials with captions. Research into subtitle speeds in standard interlingual subtitling, and more so in SDH (intra- as well as interlingual), could offer professional subtitlers a better understanding of their practice and the developments that have taken place, and, in consequence, could contribute to providing a quality service. The analysis of subtitling speeds is intended to offer a solid background to our discussion on editing, another of the crucial features of SDH.

5.2 Editing

As pointed out in the previous section, editing in subtitling is inherently connected with subtitling speed. In general, and in scenes where the original dialogue is fast, the lower the agreed maximum speed of the subtitles, the more editing needs to take place. Apart from temporal constraints, subtitling is also characterised by spatial restrictions. Indeed, subtitles for the deaf and the hard-of-hearing are usually made up of a maximum of two or three lines (rarely do they include four lines), and each line can contain a maximum of 37 to 42 characters. As general translation practice from English into most European languages results in target texts that contain 30% to 40% expansion (Georgakopoulou 2009), this adds to the need to condense the text in interlingual subtitles.

Subtitling is a diasemiotic modality (Gottlieb 1998), that is to say it is characterised by a shift in the delivery of the linguistic message from the aural channel in the original soundtrack to the visual channel in the form of written subtitles in the ensuing audiovisual production, and as a result requires viewers to watch and read instead of just listening to the dialogue. In this sense, it can be argued that reading text is a lengthier and more cognitively demanding task than listening to speech. All this shows that reduction in subtitling, whether through condensation or deletion, is an essential strategy (Díaz-Cintas and

Remael 2007: 145-171). This is to ensure that audiences have enough time not only to read the dialogue exchanges, but also to watch what is happening on the screen at the same time.

Though reduction is characteristic of both interlingual and intralingual subtitling, the following section focuses mainly on offering a detailed account of the strategies that are used specifically for editing text in SDH as opposed to standard interlingual subtitling. It starts with an explanation of the notion of redundancy, followed by a discussion of the type of editing that takes place in standard interlingual subtitling. The focus then shifts to editing in SDH, both from an intra- and interlingual perspective. Past and current approaches to editing in SDH are explored in an attempt to ascertain how the norms have persisted or evolved over the years.

According to Chaume (2004b: 16), "[a]n audiovisual text is a semiotic construct comprising several signifying codes that operate simultaneously in the production of meaning". In the case of interlingual subtitling it is the linguistic code that is subject to 'translation proper', in Jakobson's (1959/2000) translation typology – that is to say the linguistic transfer from one language to another. However, apart from the linguistic code, audiovisual materials also include paralinguistic codes, musical codes, etc. As Chaume (2004b: 22) states, "a translation that does not take all the codes into account can be seen only as a partial translation". It is important to be aware of the codes and their purpose in the interpretation of the overall meaning in the film in order to create subtitles that are informative, but at the same time do not duplicate the information perceived through other codes.

When watching audiovisual materials, viewers not only read subtitles, but also infer messages transmitted in characters' gestures, facial expressions, instrumental music, clothing styles, etc.[22] This is one of the reasons why subtitles cannot be created only on the basis of a dialogue list, as they are

[22] See Chaume (2004b) for a detailed analysis of the different filmic codes and their impact on translation activity.

always meant to be read/watched together with the rest of visual and aural material. Indeed, redundancy resulting from the interplay between the filmic codes can sometimes be of advantage to subtitlers (Díaz-Cintas and Remael 2007). Not all the verbal messages need to be subtitled all the time, as some are also contained in the visual channel, for instance when characters say 'hello' and wave at the same time, or when they confirm something and nod their heads. When making a strategic decision on what needs to be transferred in subtitles and what can be condensed or simply omitted, translators, consciously or subconsciously, refer to the above-mentioned notion of 'redundancy' (Tomaszkiewicz 2006). In general terms, redundancy means an excess of information in a message that has been constructed in a given code (*ibid*.: 127). According to Gottlieb (1998), two types of redundancy can be distinguished in the translation of audiovisual productions: (1) intersemiotic redundancy, "which enables the viewer to supplement the semiotic content of the subtitles with information from other audiovisual channels, notably the image and prosodic features in the dialogue" (*ibid*.: 247), and (2) intrasemiotic redundancy, which is present in the dialogue exchanges, as these are meant to be representations of spontaneous speech and are, therefore, usually filled with repetitions of lexical items and syntactical constructions. Both types of redundancy have different implications for standard interlingual subtitling as well as for SDH, both intra- and interlingual.

5.2.1 Editing in interlingual subtitling

Due to the inter- and intrasemiotic redundancy that is typical of audiovisual programmes, interlingual subtitles do not need to be a word-for-word rendition of the characters' speech. Nonetheless, in order to produce quality subtitles, it is essential to know how to reduce the text in subtitles and to choose the items that need to be reduced appropriately. According to Díaz-Cintas and Remael (2007: 146), there are two types of text reduction: (1) a partial reduction or condensation (often by reformulation) of the source text, and (2) a total reduction by omitting or deleting words and other lexical expressions.

After familiarising themselves with the guidelines specifying how much space and time are available for the formulation of the translated text, subtitlers eliminate linguistic material that is considered totally irrelevant to the understanding of the film's main message and condense important messages as much as is required (*ibid.*). According to Kovačič (1991), who looks at subtitling from the perspective of the theory of relevance, when the subtitler has to work under severe technical limitations, it is only the information load that is indispensable for the understanding of the diegesis of the source text, that is to say the elements that carry the experiential meaning that tends to be translated into the target language. In their attempt to reach their goals, ellipsis and reformulation are often combined to arrive at the production of informative, yet unobtrusive, subtitles. Indeed, and rather paradoxically, subtitles are believed to be most successful when viewers do not notice them (Georgakopoulou 2009), and can therefore concentrate on the story of the film instead.

The reality behind professional practice is that many linguistic expressions are often omitted in interlingual subtitles, even when time and space restrictions are not stringent (*ibid.*). One of the reasons that explains this state of affairs is the fact that the message (and the deleted/condensed elements) can be retrieved from the images and the original soundtrack. In other words, the communicative value of intra- and intersemiotic redundancy can work in the interests of the subtitlers, as they do not then need to replicate these linguistic items in the subtitles.

In addition to the awareness needed to choose the information that can be edited out in the subtitles successfully, knowledge of when to condense the text is also important. According to Georgakopoulou (2009), when most of the information that is crucial to the understanding of the plot is channelled through the images, subtitles should be as concise as possible, so that the audience can concentrate on the visual information. On the other hand, when it is vital for the viewers to understand the dialogue exchanges, the subtitles should then follow the soundtrack as closely as possible and as permitted by spatial and temporal limitations.

Apart from knowing what to reduce and when to reduce the text, professional subtitlers working in interlingual subtitling also need to be familiar with the linguistic strategies that help them achieve the required reduction in the target text. As Pedersen (2011) observes, translation taxonomies work best when they are specific to the medium to be analysed. Díaz-Cintas and Remael (2007: 150-171) offer a detailed presentation of some of the strategies that can be used when condensing, reformulating or deleting text, sometimes referred to as the 'red pencil' technique (Baker *et al.* 1984) in interlingual subtitling. According to these scholars, condensation and reformulation strategies can be applied at word as well as at clause/sentence level. Condensation and reformulation at word level includes:

- simplifying verbal phrases
- generalising enumerations
- using a shorter synonym or equivalent phrase
- using simple rather than compound tenses
- changing word classes, for example verbs into nouns, adjectives into verbs/adverbs/nouns
- using short forms and contractions

Condensation and reformulation at clause/sentence level might include:

- changing negations or questions into affirmatives, indirect to direct questions
- simplifying expressions of modality
- changing direct into indirect speech
- changing the subject of a clause
- manipulation of theme and rheme
- changing long multiple sentences into short, simple ones
- changing active and passive sentences
- use of deictics to replace nouns, noun phrases
- merging phrases into one

Like condensation and reformulation strategies, omission can also take place at word and clause/sentence level (*ibid.*). In her research, Georgakopoulou (2009: 27) discovered that subtitlers usually delete the following expressions:

- repetitions
- names in appellative constructions
- false starts and ungrammatical constructions
- internationally known words, such as 'yes', 'no', 'OK'
- expressions followed by gestures to denote salutation, politeness, affirmation, negation, surprise, telephone responses, etc.
- exclamations, such as 'oh', 'ah', 'wow' and the like
- instances of phatic communion and 'padding' often empty of semantic load, their presence being mostly functional speech embellishment aimed at maintaining the desired speech-flow

As discussed previously, omissions tend to occur when there are signs of redundancy in the message being transmitted (Díaz-Cintas and Remael 2007). Any kind of reduction of the text that makes it to the subtitles should be considered within the context of intersemiotic cohesion, namely the way in which language is interconnected with the soundtrack and the images to constitute a coherent whole (*ibid.*).

Activating the strategy of reduction as a way of editing the text that appears in the subtitles can be considered a rather recurrent norm in interlingual subtitling. It helps subtitlers to comply with the technical restrictions of this professional practice, and it is normally used when inter- and intrasemiotic redundancy is present in the scene. It also plays a crucial role when subtitling for different target audiences. Children learning to read might need shorter, less verbose subtitles with longer presentation rates, therefore requiring greater reduction rates. However, editing does not necessarily equal text reduction. In some situations, for example in the context of educational subtitles, editing might also include the addition of text in the form of the explicitation of concepts, clarifying ideas, and the like. In Pedersen's (2011) taxonomy of translation strategies, this

solution correlates to one of the specified approaches, such as completion or addition. This strategy can be applied, for instance in subtitles designed for language learning, although the pertinent spatial and temporal restrictions of subtitling would also need to be considered. Fansubbing (Díaz-Cintas and Muñoz-Sánchez 2006, Bogucki 2009), also often includes additions in the form of explanatory notes (Wang 2017), illustrated in Figure 41.

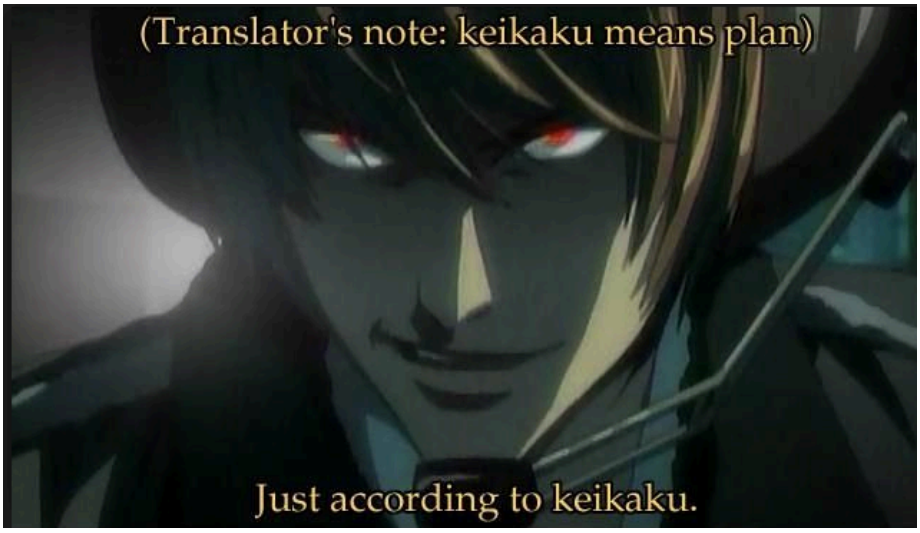


Figure 41: Example of a fansub (tvtrops.org)

5.2.2 Editing in intralingual SDH

If the same information is presented through the aural and visual channels, redundancy in intralingual SDH does not really apply to the target audience, as aural messages are either totally inaccessible (to deaf viewers) or only partially accessible (to hard-of-hearing viewers). In general, redundancy can have a positive impact on the reception of the filmic messages by the target viewers. In this sense, and in accordance with the dual coding theory put forward by Paivio (1986), which assumes that receiving information through two channels of communication reinforces comprehension, intersemiotic redundancy (see Section 5.2.1) through the acoustic and visual channels has the potential to facilitate the transmission of the messages conveyed in the audiovisual production. In SDH, though, viewers can only access one channel – the visual one – in the form of images and subtitles. Therefore, in order to compensate for intersemiotic redundancy, information that can be deduced from the aural

channel by hearing viewers should be transmitted in subtitles for deaf and hard-of-hearing audiences. This would include information about sound effects, music or character identification.

Maintaining intrasemiotic redundancy in the final output can be very useful for deaf and hard-of-hearing audiences. Words and phrases that are usually omitted in interlingual subtitling, such as forms of address, negations, confirmations of statements or exclamations (Künstler 2008), serve an important purpose in intralingual SDH, as they clarify who is speaking, confirm or negate the information given, etc. and should therefore be kept in the subtitles. In addition, intrasemiotic redundancy, which includes forms of address and exclamations for example, can also make subtitles more accessible to deaf viewers by adding extra information on difficult concepts, unusual comparisons, etc. As Jelinek Lewis and Jackson (2001) point out, deaf people may struggle with reading due to less background knowledge and lack of familiarity with certain sentence structures. If they are signers and the phonic language is considered their second language, their reading comprehension may also be negatively affected by their relatively poor knowledge of vocabulary and grammar in their 'foreign' language. As sign language has a different morphosyntactic structure from phonic language, deaf people might also have difficulties with word order and the use and understanding of functional words such as articles, prepositions and pronouns (Torres Monreal and Santana Hernández 2005). When exposed to naturally written language, which is redundant but at the same time cohesive and contains semantic cues (Ewoldt 1984), deaf people can learn more complex structures and vocabulary and expand their knowledge base, which in turn helps them make inferences and predict parts of the messages (*ibid.*). Furthermore, reliance on lip reading by some deaf and hard-of-hearing viewers should be taken into account when drafting the subtitles, because if the viewers can see the faces of the characters onscreen and the subtitles do not match the dialogue exchanges, it can cause confusion and annoyance on the part of the audience.

All of the above information supports the need to incorporate linguistic elements that might be considered redundant in pre-prepared intralingual SDH. However,

due to space and time restrictions, as well as to the fact that sound and character labels have to be added to the subtitles, some reduction has to take place. Owing to the dynamic nature of subtitling, to the varying pace at which speech is delivered in audiovisual programmes as well as to the diversified target audience, the task of editing in SDH should be conducted in a "careful and sensitive" manner (ITC 1999: 4).

In general, three main approaches to editing can be distinguished in pre-prepared SDH: (1) rewriting/reformulation (often in the form of simplification), (2) deletion and (3) a combination of these two methods. There are numerous reasons for using any of these three approaches, usually depending on the nature of the target audience (whether it consists mainly of children or adults, for example), the overall purpose of the AV material or the individual subtitler's approach (what s/he thinks might be the best solution in a particular context). History and tradition also seem to play a key role in the final solution adopted. The attitudes towards reducing text in intralingual SDH have changed over the years due to factors such as the increase in the viewers' reading abilities, their greater exposure to subtitled materials and their evolving expectations. These factors have been elucidated by research conducted by scholars like Jensema *et al.* (1996) and Szarkowska *et al.* (2011) on the comprehension of subtitles by deaf and hard-of-hearing viewers. The following paragraphs discuss the evolution of the various SDH editing practices in more detail.

In the first years of SDH, it was believed that deaf people struggled with reading in general, and it was therefore assumed that they would not be able to read verbatim (or near-verbatim) subtitles onscreen. Early research by academics from the Gallaudet University Office of Demographic Studies (Jensema *et al.* 1975, Jensema and Trybus 1978) revealed that the reading skills of deaf and hard-of-hearing graduate students were much lower than those of their hearing counterparts. Such results led to heavy editing of TV captions. As Jensema *et al.* (1996: 284-285) explain:

> The word count was cut by about a third and the reading level was cut from roughly the sixth-grade level to third-grade level. All passive voice sentence constructions were removed,

> contractions were eliminated, clauses were converted into short declarative sentences, and even jokes and puns were changed if it was felt the deaf and hard-of-hearing audience would not understand them. These captioning techniques, which almost everyone now considers overediting, continued for many years.

The deaf in the USA were pleased to have any access to television at all and therefore did not dare criticise the service. A similar situation occurred in Poland, and the same approach was taken by Polish subtitlers when SDH first came in in the 1990s. As there was no research on the reception of captions in the country, and professional subtitlers relied on advice provided by teachers of deaf students and academics from the field of deaf studies (Künstler 2017, personal communication). One of the early recommendations was the use of simplified subtitles with extended time for reading, due to the fact that deaf people struggled with understanding more complex concepts and structures in Polish. With time, subtitlers started collecting opinions from the audience through letters, e-mails and blog posts and realised that their target viewers did not like the shortening of text in subtitles, and most of them preferred to have access to the full dialogue exchanges (*ibid*.). This trend has continued to develop over the years and is the standard today in many countries all over the world. As SDH became a daily occurrence, deaf viewers felt more confident about voicing their views and started demanding that subtitlers should not be the ones to decide on the amount of text to be reduced and on what deaf and hard-of-hearing audiences understand or do not understand. Such a social development resulted in subtitling and broadcast companies introducing verbatim captioning (Jensema *et al.* 1996). As it turned out, it was faster and cheaper for them to do it this way anyway. On the rare occasions when some editing needed to take place, the 'red pencil' technique was applied through the deletion of words or phrases. In their study on closed-captioned television presentation speeds and use of vocabulary, Jensema *et al.* (1996) showed that the percentage of text edited out on TV stations in the USA varied from 0% to 19%. When editing was applied, it was justified by spatial and temporal limitations rather than deliberate policy. The 'red pencil' technique, combined with reformulation whenever necessary (usually only when the technical constraints of subtitling are too stringent), has continued ever since.

It is worth noting here that, unlike the USA or Poland, SDH practices in the UK were primarily developed on the basis of research conducted on the testing of different subtitling techniques amongst deaf and hard-of-hearing people, initiated as early as 1981 (Baker *et al.* 1984). The research was subsequently updated and published in 1984 in the form of a practical handbook to be used by television subtitlers.

As regards editing strategies, and due to the fact that viewers with hearing loss could follow the lip movements of the characters, the guidelines presented in the handbook gave priority to the 'red pencil' method over the rewriting and reformulation of text, with the ensuing deletion of words and whole phrases. They also mention that shorter subtitles are not necessarily easier to read than longer ones since, at times, longer structures help clarify the message, as in the following examples: "The man that we saw was drunk" instead of "The man we saw was drunk" (*ibid.:* 38). In the view of the researchers involved in these studies, some features of language lend themselves to more straightforward editing. These include colloquial expressions, synonyms, uncommon words, complex syntactic structures, unfamiliar idioms or dialect forms. In general, there are many situations when the subtitlers themselves need to make a decision and choose an editing style according to the nature of the scene or the programme as well as the audience's needs and expected reading skills.

Even though, according to Schilperoord *et al.* (2005: 402), the majority of deaf and hard-of-hearing viewers in Western countries seem to prefer verbatim subtitling, demanding full access to the original information, the researchers claim that "in the Netherlands, as in most other European countries, closed captions for the deaf summarize texts rather than render them verbatim".[23] Their research proved that the summarising of text affects coherence in audiovisual materials, often changing the implied meaning and making the messages conveyed less explicit than in the soundtrack. As a result, deaf and hard-of-hearing people struggle to understand subtitled materials (*ibid.*).

[23] Research published more recently by Romero-Fresco (2015) shows that in many European countries verbatim or close-to-verbatim SDH is actually being practised.

As far as the comprehension of subtitles by target audiences is concerned, several studies have been conducted with the aim of ascertaining whether it would be better for viewers to reduce the text in order to increase the time for reading it or, rather, to have longer, near verbatim subtitles with shorter presentation rates. As reduction is often dependent on the amount of speech being uttered and the chosen maximum subtitle presentation rate, Burnham *et al.* (2008) manipulated these factors independently in their study. Their experiment on text reduction – 100% (verbatim), 92% (moderate) and 84% (strict) of original speech – in subtitling for the deaf showed that there was no direct correlation between actual comprehension of the message and the level of editing in the subtitles. The only trend they could discern was a slight tendency among deaf viewers proficient in reading to understand subtitles better when the text had been reduced. Ward *et al.* (2007) obtained similar results in their study on verbatim vs. edited subtitles amongst deaf and hard-of-hearing children. No differences in comprehension were found under these two conditions. However, most of the participants stated that they preferred edited captions as these allowed them to watch what was happening on the screen more comfortably. It has also been demonstrated that, with an increase in the complexity of the captions, deaf children's comprehension diminishes (Murphy-Berman, Jorgensen 1980). One of the difficulties when subtitling for deaf children lies in the selection of the materials to be captioned, and several factors need to be taken into account, such as their reading skills, the visual characteristics of the programme, the volume and linguistic complexity of the script, etc. Cambra *et al.* (2009) also believe that subtitles should take into consideration the reading abilities of deaf children, as the results of their study showed that Spanish deaf children struggled to fully understand the messages transmitted in programmes that had been subtitled verbatim.

When dealing with the production of subtitles for educational purposes, a gradual increase in textual difficulty is an approach that has been tested by some researchers. Decker and Montandon (1984) identified two approaches to editing in SDH: (1) an intuitive one, based on common sense and on understanding the complexity of the English language, which ultimately depends on each subtitler individually; and (2) a more structured one, such as

the multilevel linguistic approach developed by a team of researchers working on the project of the same name – Multilevel Linguistic Captioning Project (Shulman 1979) –, which aimed to standardise editing procedures based on viewers' reading skills. Vocabulary, syntax and inferential content were controlled at three levels of difficulty (*ibid.*). Level 1 included the use of short and simple sentences, following the standard subject-verb-object order. Level 2 incorporated idioms and words with multiple meanings, as well as some compound structures. At level 3, subtitles made use of a wide variety of idiomatic expressions as well as more complex sentences, negative questions, etc. (Braverman 1981). The results of the experiments showed that the language level of the captions did indeed influence viewers' comprehension (*ibid.*). The participants, especially those with poor reading skills, performed better when accessing lower level subtitles.

The study replicated the results of previous research carried out by Braverman and Hertzog (1980), where the researchers demonstrated that the language level of the captions correlated with the explicit and inferential comprehension of deaf students, and participants performed significantly better when lower level subtitles were used. The multilevel approach could be beneficial when introducing subtitling to deaf children and teenagers who are still in the process of learning how to read. As Caldwell (1973) suggests, the level of linguistic complexity in the subtitles could be increased as viewers' reading abilities improved.

Nowadays, this approach could be taken when producing SDH for learners of phonic languages. In a previous article on subtitling for deaf students in Poland (Mliczak 2015), I also recommend that the text be gradually modified to match deaf students' evolving reading skills. Teachers of Polish from the Instytut Głuchoniemych [Institute for the Deaf] in Warsaw claim that the current offer of SDH is inaccessible to their students, as the subtitles are too difficult for them to follow. This conclusion led to a fruitful cooperation between the teachers and the members of the AVT Lab at the University of Warsaw, with the aim of creating simplified subtitled versions of film adaptations of compulsory books in the students' curriculum.

These alternative subtitles differ significantly from standard SDH both in the choice of vocabulary and in the syntax used. Neutral contemporary Polish was used in the adapted subtitles, alongside standard grammatical structures. All these solutions were discussed with the teachers to ensure that an appropriate level of subtitles was chosen to match the students' reading abilities. Indeed, Baker (1985) had already suggested some decades before that it would be most beneficial if the teachers of the deaf could be involved in preparing subtitles for their students. Children's opinions about the simplified subtitles were positive, and they claimed that subtitling in this form had helped them understand the messages conveyed in the films much better.

Another approach to educational subtitling was also tested by Stinson and Stevenson (2013). They thought that adding extra information to captions used in instructional videos would help increase deaf students' comprehension. Extended captions included definitions of vocabulary, labelled illustrations and concept maps that could be accessed when the viewer clicked on a particular word. It turned out, however, that there was no difference in comprehension between the standard and expanded captions. In the experiments, the students accessed only 20% of the extended information, which might have been the reason why their comprehension did not improve. They stated, though, that they considered the option to learn through the use of extended captions beneficial when watching instructional videos. The drawback of having to interrupt the watching experience in order to access the extended information can be partially blamed for the lack of success of this experiment, though the strategy might still be useful in educational contexts where students have enough time to learn from all the additional data.

The majority of deaf and hard-of-hearing people in the USA and the UK opt for verbatim subtitling (Robson 2004, Romero-Fresco 2016). This holds true for Poland too (Szarkowska *et al.* 2011, Szarkowska and Laskowska 2014). Target viewers state, for instance, that with verbatim subtitling they are better equipped to develop their phonic language skills, complaining that sometimes edited subtitles change the actual meaning of the original text (Szarkowska and Laskowska 2014). In addition, another reason for the preference for verbatim

subtitles might be that, when exposed to same-language subtitling as opposed to interlingual subtitles, the deaf and the hard-of-hearing are more often able to notice any deviations from the original dialogue that occur in the subtitles due either to residual hearing or their ability to lip read. Indeed, in a study undertaken by Szarkowska (2010), most participants complained about the quality of intralingual SDH, whereas interlingual SDH did not raise their concerns. This is, of course, due to the fact that, in interlingual subtitles, there is no exact formal correspondence between the original utterance in another language and the subtitle text in Polish, which means that viewers are unable to fully appreciate the editing choices that have taken place unless they are very conversant and familiar with the foreign language. Furthermore, participants expressed their preference for verbatim subtitles because access to them meant that they received the same information as their hearing counterparts (Szarkowska and Laskowska 2014).

Verbatim subtitling, however, is not always feasible. The results of Szarkowska *et al.*'s (2011) eye tracking study on verbatim vs. standard and edited subtitles show that the solution might be to use standard subtitles as (1) they leave enough time for the viewers to read the subtitles and to watch and appreciate the visual content at the same time, and (2) they still allow people with residual hearing as well as lip readers to follow the dialogue due to the fact that standard subtitles are very similar in content to verbatim subtitles, as they are usually edited minimally and only oral discourse elements such as repetitions, false starts, or hesitations tend to be deleted. One of the conclusions that can be drawn from this discussion is that the use of standard subtitles, minimally edited for the purposes of pre-prepared SDH – as opposed to full verbatim ones – is a feasible option, as they adhere to the technical specifications and seem to be preferred by the viewers.

5.2.2.1 Editing in live subtitling

Due to its challenging nature, live subtitling is quite often criticised by the target audience. Latency in the projection of the subtitles is one of the factors to impact synchronicity with the audio as well as with the visual cues negatively,

thus affecting the comfort of watching live subtitled programmes both for deaf and hard-of-hearing viewers. In his study in which 250 subtitles from four different programmes were broadcast (semi)-live by the BBC (sports, news, interviews and weather forecast) were analysed, Romero-Fresco (2009) showed that respeakers lagged behind their original speakers by about 20 to 40 wpm, which might account for the reason why editing seems to be unavoidable in subtitling despite the fact that many deaf and hard-of-hearing people demand verbatim subtitles, as they consider editing in subtitling as a sort of censorship (*ibid.*). Romero-Fresco's (2009) findings demonstrate that quantitatively reducing text does not necessarily mean that information is being lost. Indeed, on average, in half the cases analysed when the text was reduced there was no loss of information. Such results highlight the fact that editing out does not need to lead to less accessible content in AV materials. In addition, on the basis of a later eye tracking study, Romero-Fresco (2016) concludes that fully verbatim live subtitles are not only difficult to prepare, but they are also not desirable, as with presenters' speech rates of over 180 wpm, viewers tend to spend most of their time reading subtitles and are left with too little time to watch the images. In another study aimed at professionals, Luyckx *et al.* (2010) asked respeakers to create three types of live subtitle: (1) verbatim, (2) summarised, and (3) very much reduced. It turned out that the participants were unable to produce word for word subtitles, with reduction levels reaching 50% when they were verbatim. In terms of the editing strategies used, professionals resorted to a combination of omissions and paraphrases, which included using shorter synonyms, omitting or simplifying indicators of modality, and substitution, to mention but a few. Experiments of this nature show that verbatim live subtitling is unrealistic, especially when block subtitles, subtitles that appear on the screen as a whole as opposed to scrolling subtitles, and where every word appears on the screen, are used (*ibid.*).

Reduction rates in live subtitling vary from country to country. According to Romero-Fresco (2016), in the UK they average 16%, ranging from a minimum of 12% (in news programmes) to a maximum of 20% (in chat shows). Other European countries, such as Spain or Switzerland, practise more stringent editing. In Flanders, reduction rates might even reach 54%. In the US, on the

other hand, where there is a strong preference for verbatim subtitling, the rates are between 0% and 19% (*ibid.*). Live subtitling in Poland is only starting to be introduced on television, so that research on editing rates and viewers' reactions is yet to be conducted.

5.2.3 Editing in interlingual SDH

Interlingual SDH is a professional practice in which the subtitles are written in a language that differs from that spoken in the film (Neves 2009). Even though this type of SDH gained some popularity thanks to the DVD market, the offer is still scarce (*ibid.*). Nevertheless, it is interesting to observe what patterns emerge in this new mode, especially as regards editing.

Interlingual SDH combines the features of standard interlingual subtitling (translation from one language to another) and intralingual SDH, whereby extra elements are included in the subtitles in an attempt to help deaf and hard-of-hearing viewers access the information contained in the aural communication channel of an audiovisual production. A practice of this nature raises questions about editing strategies in interlingual SDH: should editing strategies in interlingual subtitling follow those used in intralingual SDH? Are they, in fact, similar or are they totally different?

As intersemiotic redundancy in these situations is "either non-existent (in the case of deaf viewers) or limited (in the case of the hard-of-hearing)", as Szarkowska (2013: 72) notes, it would seem that elements that could safely be omitted in interlingual subtitling should be kept in interlingual SDH whenever possible. Indeed, Neves (2009) also claims that subtitles for the deaf should ensure a level of redundancy that is typically expressed through visual and auditory channels. This may be affected by space and time constraints since, like all SDH files, features such as sound description labels, need to be added. On the other hand, editing out some information might be easier in interlingual SDH due to the fact that the target audience is less likely to notice discrepancies between original dialogue exchanges and subtitles. The results of Szarkowska's (2013) research show that unlike interlingual subtitling, in

interlingual SDH, some forms of spoken discourse are maintained – an approach that helps to compensate for the lack of intersemiotic redundancy. As Neves (2009:160) states, "losing redundancy for the sake of economy [often results] in a greater processing effort on behalf of the reader/viewer". She also adds that, in the case of deaf viewers, redundancy is particularly important, as it can make reading less demanding. Audiovisual cohesion should be reinforced through language, and subtitles must be prepared so as to match the visuals in order to avoid confusion on the part of deaf viewers.

In general, interlingual SDH differs significantly both from standard interlingual subtitling and from intralingual SDH, but combines features of both types to create a new modality. In Poland, interlingual SDH broadcast on TV is similar to intralingual SDH as far as the use of colours and the character-dependent placement of the subtitles are concerned. Interlingual SDH for DVD, on the other hand, looks like standard interlingual subtitling, that is to say there is no chromatic variation, subtitles are centred and information on sounds is added.

To edit or not to edit in subtitling, and especially in SDH, has always been one of the most heated debates in the field. Given the fact that target audiences can be very different, the ideal, tough, perhaps utopian, solution would be to provide more than one subtitle track with varying levels of edited text. Such an approach is far from new and was already suggested by the researchers at Southampton as early as 1981 when they analysed viewers' preferences (Baker *et al.* 1984). They claimed that this solution was indeed possible:

> [They had] devised a relatively straight-forward method of offering two different levels of subtitling on a single Teletext page. Using this option, it would be possible for the viewer, by push-button operation, to select either simplified subtitles or more elaborate ones. Thus simplified subtitling would be only for those requiring it. Furthermore, the less able reader would have the option of progressing, at his own speed, to more complete subtitles. (Baker *et al.* 1984: 41)

Neves (2007) and Cambra *et al.* (2009) also suggest that viewers should be able to choose the level of subtitling that suits them best. Nevertheless, the

inclusion of more than one SDH track, with different degrees of editing, is very rarely on offer on the market. One of these examples is the captioning used in *Arthur*, the children's animated television series in the USA. Apart from standard captions, the Media Access Group also prepared edited captions. Even though, according to the experiments carried out by Ward *et al.* (2007), no difference in comprehension among participants was noted, 11 of 15 students reported that they preferred edited captions, as they enabled them to read and watch the programme at the same time. The standard practice in television subtitling, however, is to provide only one SDH track to cater for all target audiences. It seems that now, as Szarkowska *et al.* (2011) suggest, the best solution is to use minimally edited subtitles.

5.3 Extra- and paralinguistic information

The extralinguistic dimension in AVT makes reference to the acoustic nonverbal elements (Delabastita 1989), which in the specific case of SDH materialises in the written presentation onscreen of sound effects and music, as well as character identification. Paralinguistic information is also important for the diegesis of the audiovisual production, and is reflected in the speed of voice, intonation, tone, accent, etc. The importance of including extra- and paralinguistic elements in SDH – even though obvious due to the nature of the target audience – is often minimalised in favour of subtitles that reproduce only characters' monologues and dialogues. Speech rendition also seems to have priority because of deaf and hard-of-hearing people's desire for verbatim subtitles. This, however, does not necessarily guarantee that the subtitles will be easier to read and understand, or that the experience of watching audiovisual materials will be more comfortable. The codification of extra- and paralinguistic information in the subtitles can be understood as a bridge that complements dialogue and images to form a coherent semiotic whole. As this cognitive activity is sensed rather than consciously processed, it does not always draw our attention but is usually abundantly obvious when the overlap of signifying codes is missing. This is why a great effort should be made into bringing out the hidden meanings in these extra- and paralinguistic elements and reflecting them in the SDH tracks. The following sections include detailed

reasons and ways of rendering such information. Each dimension is analysed by offering a working definition and discussing its evolution in the context of AVT, especially when addressing deaf and hard-of-hearing viewers, as well as mapping out the standards and norms prevalent in the industry.

5.3.1 Sound

Sound in audiovisual materials encapsulates dialogue exchanges, monologues, offscreen voices sound effects and music. As dialogue has already been discussed in the previous section on editing, this part focuses on sound effects and instrumental music – elements that pertain to the extralinguistic realm and have a significant function in SDH.

Sound in film undeniably plays a major role in the creation of a unique filmic experience. Even silent films were never actually watched without sound. Even though actors' dialogues could not be heard, the screenings of films were always accompanied by live and recorded music and often narrated by a master of ceremonies. In fact, originally, they were never referred to as 'silent films' and were simply known as 'moving pictures' (Kalinak 2015). It was only some years later, when synchronised sound films were just coming in in the early 1930s, that such terminology came to be, distinguishing them from the new 'talkies'. The advent of sound meant that the synchronisation of visuals and acoustics in films was finally made possible (Elsaesser and Hagener 2010). However, at that time, some felt that, with the introduction of sound, film was in danger of losing its creative expression and sound would eventually betray and corrupt this artistic form of communication (*ibid.*). Despite such forlorn opinions, the process proved to be irreversible, and synchronised sound became an inherent and very popular part of a film. As Balázs (1953: 197-198) observes:

> The silent film, when it became an art, discovered for us an unknown visual world […]. It is an old maxim that art saves us from chaos. The arts differ from each other in the specific kind of chaos which they fight against. The vocation of the sound film is to redeem us from the chaos of shapeless noise by accepting it as expression, as significance, as meaning.

The real innovation was not only about adding sound, but about creating extra meaning through sound. In Kalinak (2015: 4)'s words, "[s]ynchronized sound changed the relationship between image and sound as it precipitated an aesthetic shift toward realism. Sound would anchor the image in as faithful representation of reality as the technology could muster".

Authors like Neves (2009: 163) are at pains to emphasise that "sound plays an important role in [the] narrative force [of audiovisual texts]", and yet, unlike decoding speech, we do not process sound consciously. This is why it may be difficult for subtitlers to render it appropriately in the captions created for deaf and hard-of-hearing viewers. Nevertheless, the more they understand about the presence and purpose of sound in film, the greater the likelihood that they will be successful in its transfer, and the target audience will be able to access it.

When exploring the defining characteristics of sound in film, Bordwell and Thompsson (1950/2010) distinguish two key types of sound: diegetic and non-diegetic. Diegetic or actual sound originates from the source within the film's world, that is to say within the film's diegesis. This could involve the voices of the characters, sounds made by objects that are present in the film space and music produced within the story. Non-diegetic or commentary sound, on the other hand, comes from a source clearly located outside the story. Examples include a narrator's commentary, mood music and sound effects added for dramatic purposes (*ibid.*). On the basis of this division, diegetic as well as non-diegetic sound can either be reflected or omitted in SDH, depending on the importance assigned to the particular sound in understanding the plot of the film.

Diegetic sound may exist onscreen or off-screen. Off-screen instances are usually subtitled more often than onscreen ones, because deaf audiences have no other means of accessing them. Due care should be taken when rendering onscreen sounds, as sometimes, when the source is clearly seen onscreen, viewers with hearing loss may find such labels unnecessary. The general rule when dealing with sound is that it should not be expressed in the captions unless it is a difficult sound to grasp or interpret on the basis of the visuals

alone. As Baker (1984) suggests, in these cases the significance of a particular sound can be better established after watching all the audiovisual material without sound.

Some challenges might arise when having to deal with non-simultaneous vs. simultaneous sounds, the former being a sound that is "heard at a point in plot time that's different from the point at which it originates in story time" (Spadoni 2014: 155). An example of non-simultaneous sound might be the memory of somebody crying. Used for a certain artistic purpose, it may prove challenging to render in SDH. Indeed, unless the action is clearly visible, the label should incorporate additional information qualifying the sound and its origin. A similar challenge might arise when expressing asynchronous sounds, for instance "when the sounds of one scene are still heard during the next one" (Balázs 1953: 218).

It is also worth mentioning the value of intended silence. Often ignored or simply overlooked, silence may fulfil an important function within a scene, such as creating a certain atmosphere or acting as a warning of something that is about to happen. As Boggs and Petrie (2004: 260) emphasise, silence can be very powerful and "[t]he sudden change from vibrant, noisy movement, to silent, frozen stillness can stun us for a moment". It can create tension and make viewers concentrate more on the visuals. To a certain extent, the use of deliberate silence in a sound film can be compared to the application of black and white in a colour film (Bordwell and Thompson 1950/2010). In this respect, a sudden silence that is not indicated in the subtitles may lead to confusion on the part of the viewers who expect to receive subtitling input throughout a film, and any unexplained long breaks may leave them wondering whether a technical fault has occurred and the service has been interrupted. Baker (1984) rightly claims that a long pause in subtitles is as frustrating to deaf viewers as the lack of sound can be to hearers. Therefore, it is important to insert relevant subtitles when appropriate, for instance "LONG PAUSE" (*ibid.,* BBC 2009: 24, BBC 2018b) so as to prevent the conclusion on the part of the audience that the subtitles have failed. When the silence lasts a long while, it may be appropriate

to repeat the subtitle, as recommended by the Polish guidelines drafted by the foundation, Culture Without Barriers (Künstler and Butkiewicz 2012).

5.3.1.1 Sound effects

The concept of sound effect incorporates “any sound, other than music or speech, artificially reproduced to create an effect in a dramatic presentation, as the sound of a storm or a creaking door” (Thesaurus Dictionary n.d.). Sound effects can be produced by objects, animals, humans or other phenomena, for example bangs, roars, snores/snoring, wind etc. Depending on their function in the film and whether the source of the sound can easily be seen onscreen, sound effects can either be included or not in SDH. As the foundation, Culture without Barriers, recommends, obvious sounds, easily interpreted from the images, should not be described because it can be safely assumed that the deaf and the hard-of-hearing can relate to similar situations in which they may have been immersed in real life (Künstler and Butkiewicz 2012).

The actual description of sound effects in SDH depends on many factors, such as “source, location, on-set, frequency, speed, duration, loudness, and gradation, among others” (Neves 2005: 244). SDH translators need to understand the specific aims of these features and gauge whether to transpose them onto the subtitles or not. For instance, as Neves (*ibid.*) points out, non-synchronous sound effects should always be reflected in SDH subtitles so that the target audience understands what is happening. It is up to the professional to work out whether the representation of a particular sound effect, in a given scene, will contribute to a better understanding of the programme or not. Many decisions should be taken into account here, for instance whether there is time and space to include the information, whether the information is crucial or marginal to the plot, whether the source of the sound effect is visible or not, etc. Guidelines issued by bodies such as the BBC (2009, 2018) and the foundation, Culture without Barriers (Künstler and Butkiewicz 2012, KRRiT 2016), usually recommend that sounds that are important to the action and sounds that cause characters to react should be included in SDH. As it is, in fact, rather general, this piece of advice can be considered subjective and, as a result, its

implementation might lead to a lack of a consistent approach as regards the representation of sound effects in SDH.

Another important issue concerns the way in which the sound effects are to be linguistically rendered in the subtitles. Simple one-word descriptions might not be enough, in which case additional information about a particular sound effect is needed, for instance the way in which somebody laughs or screams (Neves 2005). This calls for the use of different verbs, verbal tenses or the addition of adjectives or adverbs that help to further clarify the meaning of the particular sound effect.

The formal representation of sound effects on the screen is usually rendered in the form of descriptive labels, either capitalised or in small letters, in italics, inside round or square brackets and sometimes with a coloured background, depending on the platform, country, broadcaster, etc.

Figure 42: Sound description in *2012* (DVD)

Figure 43: Sound description in *History Boys* (DVD)

Figure 44: Sound description in *The Devil Wears Prada* (TV)

On Polish TV, sound descriptions are usually written in dark blue or white capitals on a blue background.

Figure 45: Sound description on TVP

Figure 46: Sound description on TVP (Szarkowska and Laskowska 2014: 31)

Now, even though dark blue is still the most popular colour to describe sound on a variety of channels, other colours can also be found – purple for instance, as shown in Figure 47 below:

Figure 47: Sound description on TVP

This information is often available in the guidelines, and the best tactic to deal with the representation of sound effects in the subtitles is to be consistent in the approach chosen and adhere as much as possible to the audience's preferences. Those are to use white letters against a black background, followed by a choice of white letters against a blue background, as indicated in Figure 46, as opposed to, for instance, white letters on a red background (Szarkowska and Laskowska 2014).

In one of the largest research projects carried out on deaf and hard-of-hearing viewers' preferences and the comprehension of subtitles in Europe, entitled Digital Television For All (DTV4All), all the Polish deaf (100%) and 61% of hard-of-hearing participants opted for sound description labels (Szarkowska *et al.* 2015a), rather than the use of icons or the absence of sound descriptions. In the Hybrid Broadcast Broadband for All (HBB4ALL) study, in which 427 Polish participants took part, most viewers liked the use of both capitals and small letters in square brackets when describing sounds, as opposed to round brackets or no brackets at all (Szarkowska and Laskowska 2014). One of the main findings from this experiment was that the most important thing for deaf and hard-of-hearing participants was consistency in the way in which sounds were represented in the subtitles, and that these subtitles should be clearly distinguished from the subtitles representing dialogue exchanges (*ibid.*).

Apart from the use of labels to describe sound effects, especially in the case of subtitling for children, onomatopoeic expressions can also be used in subtitles. In this respect, the recommendation in the case of children's programmes is to

use a descriptive label followed by the actual onomatopoeia, especially when the source of the sound is not visible (Künstler and Butkiewicz 2012: 13), for example “DŹWIĘK DZWONKA: Dzyń, dzyń!” [SOUND OF BELL: Ring, ring!], “SZUM WIATRU: Szuu, szuu…” [SWOOSH OF WIND: Shoo, shoo…].

Polish guidelines also mention the use of icons and symbols to represent the sound source, such as a TV set, a telephone or a musical note, as illustrated in Figure 48 below:

Figure 48: Icons representing sound sources

Such icons should stay on the screen for the duration of the sound, whereas accompanying descriptive labels of the sounds should appear only at the beginning and last for a shorter period of time. Apart from the musical note, however, Polish deaf and hard-of-hearing people are not usually accustomed to the use of icons in subtitles, and in the reception study mentioned above and carried out by Szarkowska *et al.* (2015a), only 11% of hard-of-hearing participants preferred the use of icons over descriptive labels. Rather tellingly, none of the deaf participants chose this option. On the other hand, however, the comprehension results, based on an eye tracking experiment, proved to be better when the icons were used, both in the case of the deaf (74%) and the hard-of-hearing participants (73%) (Szarkowska *et al.* 2015b). Nowadays, when icons are gaining in popularity due to their succinct form, easier access and ubiquitous presence – for example on smartphones and other digital devices –, people are becoming more familiar with them, and their use in SDH may be more common in the not-so-distant future. Given the time and space constraints that characterise the production of SDH, incorporating icons into subtitling is definitely a practical approach as it saves space and can speed up the understanding of the message being conveyed.

5.3.1.2 Instrumental music and songs

According to Gorbman (1980: 184), film music is very different from 'pure' music in the sense that it is one of the many components that make up a film, and it is "the interrelations between music and the rest of the film's system that determine the effectiveness of film music".

Since the origin of film, music has played a key role in cinematic language, fulfilling many functions in creating an optimal filmic experience. As Gorbman (*ibid*.: 185) has emphasised, "in the silent film music communicated narrative information that has since been restored to the province of dialogue and sound effects. It also had the decidedly practical task of drowning out the unromantic noise of the movie-house projectors". Additionally, music helped viewers enjoy the rather unnaturally lively action in the film. Despite the many changes that have taken place since, the significance of music has not diminished since the early 20th century. Indeed, "image, sound effects, dialogue and music-tract [sic] are absolutely inseparable during the viewing experience, and they form a *combinatoire* of expression" (*ibid.*: 190).

For hearers, the presence of music in a film always has a function as it is included to consciously create an effect and produce a certain mood in the recipients (Neves 2005). And yet, as deaf viewers are deprived of this experience, some might think that it is unnecessary to describe music to people who cannot hear. However, SDH tracks provide information to a very heterogeneous group of viewers (see Chapter 3), which includes people who have lost their hearing later in life and may easily relate the references to music in the subtitles to some of their previous experiences. There are also hard-of-hearing viewers, whose residual hearing might activate some memories. Finally, as Neves (2009) emphasises, even those with congenital hearing loss might learn to appreciate music not only through TV but also thanks to literature or by feeling it through vibrations and then recognise the references included in a film.

To convey music in SDH is not an easy task for subtitlers, as they need to understand the hidden messages music carries – and these can be highly

subjective – and represent them in verbal form. As with sound effect labels, there are a great variety of ways in which music in subtitling can be conveyed. In most guidelines, there is usually a section discussing how to deal with background or atmospheric music. The usual advice is that it can be subtitled using a general label, for example “EERIE MUSIC” (Baker 1984: 24). In the case of the BBC (2009: 31, 2018b), incidental music that is known should be marked with a label followed by the title of the piece, as in “MUSIC: “God, Save The Queen””, “MUSIC: A waltz by Victor Herbert”. Unknown music that only adds to the atmosphere should not be labelled. If it is crucial to the understanding of the plot, a general descriptive label should suffice. The USA guidelines recommend the use of labels describing the mood of the music, but at the same time the subtitler should try to be objective in the descriptions. Whenever known or significant, and if time allows, the name of the author as well as the title should be given, e.g. *“[The Beatles singing “Yesterday”]”* followed by the lyrics (CMP 2006: 24). In the Polish guidelines compiled by the foundation, Culture without Barriers (Künstler and Butkiewicz 2012), music is discussed in the section dedicated to the representation of sound. It is recommended that music used to create an atmosphere in a film should be presented onscreen in the form of labels describing the emotions evoked by the music, for example jolly/cheerful/sad/dramatic/unsettling music (*ibid.*: 10). Titles or composers’ names should be mentioned only when it matters to the development of the plot or the musical pieces are particularly famous. One of the questions in the study on viewers’ preferences, conducted by Szarkowska and Laskowska in Poland in 2014 as part of the HBBTV4All research project, was to choose a favourite means of identifying music in audiovisual material. Three options were given:

Figure 49: Identifying music (Szarkowska and Laskowska 2014: 23)

The hash tag was traditionally used in the UK to indicate music on analogue television. The most popular options were the word ‘MUZYKA’ [MUSIC] and the musical note ♪, probably due to the fact that they are the most familiar to Polish viewers. The hash tag has not been used on Polish TV, though. Some respondents added that the word ‘MUZYKA’ [MUSIC] is enough when instrumental music is playing, whereas in the instances of lyrics, the musical note ♪ might be more appropriate. Most participants opted for labels describing the emotions brought out by the music, for example ‘[WESOŁA MUZYKA]’ [HAPPY MUSIC]. Many respondents preferred to have the type of music described, for example ‘[MUZYKA GITAROWA]’ [GUITAR MUSIC].

With regard to rendering songs in SDH, the first set of SDH guidelines in the UK recommend that, when somebody is singing, the capitalised subtitle ‘SONG’ should be inserted followed by the first few words of the lyrics (Baker *et al.* 1984). If possible, song lyrics should be subtitled verbatim, or with a reduction of whole verses. Both the ITC guidance (1999) and the BBC (2009, 2018) stylebook also recommend that songs should always be subtitled, unless they are interrupted by dialogue. The USA guidelines also advise that lyrics should be subtitled verbatim using a musical note at the beginning and end of the lines

(CMP 2006). The Polish guidelines do not specifically refer to the use of songs in subtitles. However, the results of the study on viewers' preferences conducted by Szarkowska *et al.* (2015a) show that nearly 60% of the participants wanted to see the lyrics of meaningful songs included in the subtitles.

5.3.2 Character identification

Identifying characters in audiovisual programmes with SDH contributes to an easier and better reception of the materials by the target audience. By resorting to the use of different colours, the inclusion of identifying labels, the alteration of the onscreen positioning of the subtitles or any possible combination of these techniques (see Figure 50 and Figure 51), viewers can understand who is speaking off-screen and can also follow who is saying what in busy scenes where the characters can be seen onscreen, but where fast dialogue exchanges prove challenging in terms of identification.

Figure 50: Character identification by use of colour and positioning in *The Big Bang Theory*

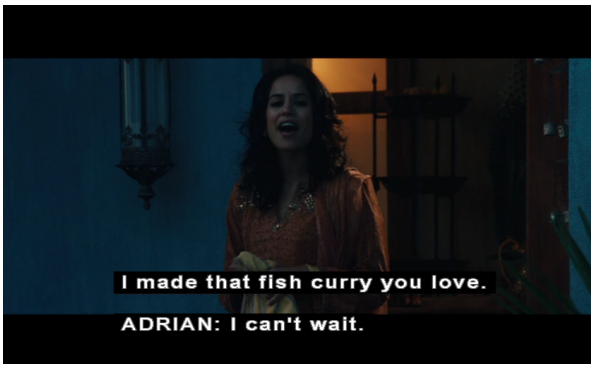


Figure 51: Character identification through the use of labels in *2012*

White, cyan, green, yellow and magenta are the most popular colours used to distinguish characters in SDH, although some countries avoid magenta because it is considered to be less legible (Baker 1984 *et al*.). This rather chromatic palette of only five colours is due to the limitations of analogue technology, which only allowed a limited number of colours. Despite the digital changes, tradition still seems to dictate the use of colours, restricting them to these colours only. In Poland, the guidelines compiled by the Culture without Barriers Foundation (Künstler and Butkiewicz 2012) recommend the use of only four colours – namely the usual white, yellow, green and red –, though the mention of red seems to be a mistake, as it is usually cyan that is used alongside the other colours on Polish public television. The guidelines also suggest the assignation of one and the same colour to a character for the duration of the whole programme, something that distinguishes Polish from English SDH. In some Polish commercial stations, the use of a more varied palette of colours to identify characters can be observed increasingly often, including colours that are less visible on the screen, red or purple for instance (see Figure 11 and Figure 12 in Chapter 3).

There are some advantages to using colours to identify characters. For instance, in comparison with labels they do not take up any extra space, and in TV series viewers become familiar with a character's colour, therefore facilitating identification. However, there are also some disadvantages. As Mälzer-Semlinger (2015) notes, the use of colours may, for instance, distort the aesthetics of black and white films. Another disadvantage to resorting to chromatic differentiation is the fact that, usually, the main characters in a

programme are systematically assigned particular colours, thus revealing to the deaf and the hard-of-hearing information that should not be available to the audience so early in the film. An example can be found in the guidelines of the German public TV-channel, *Zweites Deutsches Fernsehen* (ZDF), which state that a murderer in a series should never be assigned one and the same colour, even if s/he is one of the main characters (*ibid.).* On the basis of the way in which colours are normally assigned to the various characters, viewers may be able to predict the importance that a certain character will have in a film, potentially spoiling the cinematic experience. As we shall see in the next chapter, Polish subtitlers also have their individual preferences in terms of assigning colours to characters, for example green for a girl, etc. As professionals, they are aware, though, that there are sometimes situations when their system of using specific colours to denote certain characters might be counterproductive, as has been noted above in the example from Germany.

Positioning subtitles close to the characters that emit the utterances is another way of identifying a speaker. In Poland, this practice was adopted in the first years of SDH provision on TVP. Nowadays, however, positioning subtitles is a rather rare occurrence on television, as colours have become the main tool for speaker identification. In their reception study on Polish viewers' preferences, Szarkowska *et al.* (2015a) found that, when asked, participants usually showed a preference for the most familiar solutions: in this particular case, the use of colours and the variation in the placement of the text onscreen. However, under experimental conditions (Szarkowska *et al.* 2015b), in an eye tracking study focusing on the comprehension of subtitles that made use of three different strategies to identify characters – namely descriptive labels, a change of colours and the placement of text next to a speaker – most deaf (63%) and hard-of-hearing (62%) participants preferred it when the use of labels was applied. This came as rather a surprise, particularly when taking into account the fact that identifying labels are not often used on Polish TV.

5.3.3 Paralinguistic information

Paralinguistic information conveyed through the acoustic channel is yet another communicative dimension that needs to be borne in mind when creating SDH, so that the target viewers can have comprehensive access to the audiovisual material. Paralinguistic information can only be interpreted in relation to language since, as Poyatos (1983: 129) remarks, "what truly gives the spoken words their total meaning (which at any rate is not contained only in them) are a series of vocal/narial voice modifications and independent sounds and meaningful silences, which today we subsume under the *paralanguage*". Even though a deaf person can still rely on kinesic information (part of the triple structure of speech consisting of language, paralanguage and kinesics) and can interpret common emotions when they see them, they will still miss out on the paralinguistics (Neves 2009), which can consequently lead to misunderstandings in terms of what is going on onscreen and in conversations between deaf and hearing people. In the latter case, misunderstandings can be clarified, whereas during the reception of an audiovisual production such clarification is not possible.

As regards their classification, Poyatos (2002) offers a comprehensive list of paralinguistic features together with their defining characteristics. They include (1) 'primary qualities', which are basic personal voice features such as loudness, tempo, pitch, and the like; (2) 'qualifiers', closely related to voice types, like breathing control, laryngeal control, oesophageal control, etc.; (3) 'differentiators', that rely on physiological and emotional reactions, such as laughter, crying, shouting, panting, yawning, etc.; and (4) 'alternants', that the author defines as vocabulary beyond the dictionary, such as grunts, sniffs, gasps, pants, etc. and are used to express feelings and emotions, amongst other functions. Given the fact that the paralinguistic dimension is often unavailable to deaf and hard-of-hearing people, as it can usually only be apprehended from the tone or colour of voice in each speech instance (Neves 2009), it is imperative that all of these features should be identified by SDH subtitlers, who then need to make a decision as to what type of information conveyed through paralanguage can be accessed directly from the film by an

audience with hearing problems, and what features may be lost if they are not spelt out in the subtitles. Certain rhetorical devices, like irony and sarcasm, can change the meaning of the message, in which case the viewer needs to be informed in the subtitles, usually by means of adding extra information in the form of explicitation, in order to avoid misunderstandings.

Taken for granted by hearing people, paralinguistic information can easily be overlooked when subtitling for the deaf and the hard-of-hearing, which, in turn, may lead to the misunderstanding of the message conveyed, especially when there are no visuals on the screen that can help in deciphering a hidden meaning. When emotions are clearly visible on the screen, paralinguistic information in the form of subtitles might not be necessary, as these are only necessary when the expression of feelings is not so evident from the visuals. When rendered in the subtitles, paralinguistic information is most often visually presented through the use of labels as well as expressive punctuation, such as the use of capital letters or exclamation marks to convey shouting, the reduplication of certain vowels or consonants to reflect stuttering, the presentation of words or whole sentences in brackets to indicate whispering, or the use of capitals to underline emphasis (BBC 2009, 2018). In the case of irony or sarcasm – rhetorical devices that rest on intonation –, in the UK an exclamation or question mark at the end of the sentence is placed in round brackets, for example “Charming(!)”, “You’re not going to work today, are you(?)” (BBC 2009: 21, 2018b). In Poland, however, the use of descriptive labels is recommended, for example “KPIĄCO: No to załatwiłeś sprawę…” [SCORNFULLY: Now you sorted it…] (Culture without Barriers: Kunstler and Butkiewicz 2012: 10). This is also the case when characters speak with an unusual accent or use archaic language. When a speech would be hard for the viewers to understand descriptive labels are used, for example “MÓWI GWARĄ ŚLĄSKĄ: Nie będę pracował byle gdzie, tylko w kopalni albo na kolei!” [SPEAKS SILESIAN LANGUAGE: I won’t work wherever, only at the coalmine or at the railway!] (Künstler and Butkiewicz 2012: 8). The UK adopts the same approach for clarifying accents or unusual speech with labels (BBC 2009, 2018b).

A novel approach to conveying emotions was taken in Portugal at the turn of the century, whereby a number of emoticons were used in the drafting of the subtitles to indicate the following paralingustic information: happy :-), sad :(, angry :-/, surprised :-S, confused :-&, irony ;-), acting out sadness or anger ;-(, screaming :-O, speaking softly :-° (Neves 2009). These emojis proved to be very effective and the audience reacted in a very positive way to their introduction in the subtitles, most likely because they took up very little space and were very easy to understand (*ibid.*). In the case of Poland, the guidelines compiled by the foundation, Culture without Barriers, (Künstler and Butkiewicz 2012) state that it is essential to describe the manner of speech specific to a particular character, for example whether he or she speaks very fast or slowly, has a speech impediment or is imitating somebody, etc. Unless it is obvious from the plot and/or the visuals, a character's intentions that contradict her/his statements should also be indicated in the subtitles, for example sarcasm, irony, etc., as indicated above.

In the DTV4All experiments carried out in Poland by Szarkowska *et al.* (2015b), the participants had the best comprehension results when they were exposed to clips containing paralinguistic information in the form of descriptive labels (deaf – 78%, and hard-of-hearing – 73%), even though most of the participants had stated, when asked, that they did not need this type of information in the subtitles. The use of emoticons, on the other hand, led to lower comprehension scores, possibly due to the fact that Polish viewers were not used to seeing them in subtitling on television (*ibid.*).

However paralinguistic information is rendered in the subtitles, it is recognising its function that is of paramount importance. If the target viewers' level of understanding of the message conveyed in the film matches the intention of the film creator, the subtitles can be said to have successfully fulfilled their aim.

All the features that form part of the extralinguistic and paralinguistic dimensions play a significant role in the communicative power of audiovisual materials. Sound in film is a dominant tool. In the words of the Japanese cineaste, Akira Kurosawa, "cinematic sound is that which does not simply add to, but multiplies,

two or three times, the effect of the image" (Boggs and Petrie 2004: 235). The fact that we are so used to ignoring sound around us, and that we tend to regard it as a mere background to the visuals (Bordwell and Thompson 1950/2010), means that we do not usually pay much attention to it when watching films or other audiovisual productions. The terminology we use is in itself most revealing, and the predominance given to the receptors being 'viewers' and to expressions like 'watching' films suggests that sound is perceived as secondary to images (*ibid.*). In order to fully understand its role in a film, we should rather 'listen' to films, especially when the ultimate aim is to convey to deaf and hard-of-hearing audiences the emotional meanings hidden behind the use of certain sounds. The same applies to the rendition of paralinguistic elements. Loudness, accent, pitch or voice timbre make a given character stand out and be recognised. Furthermore, filmmakers can manipulate sound to create specific results, such as making a young boy speak with a man's deep voice, or the reverse, in an attempt to produce comic effects (*ibid.*). Admittedly a very challenging task for SDH subtitlers, ensuring that the subtitles contain as many extralinguistic and paralinguistic elements as are deemed necessary (and possible, given the temporal and spatial restrictions) is a valid step towards guaranteeing that audiovisual productions are fully accessible to deaf and hard-of-hearing viewers. In this respect, every effort should be made in order to provide the same information to the deaf as is available to hearers.

6 EMPIRICAL STUDY

The current chapter concentrates on the empirical study carried out in order to analyse the evolution of SDH norms in Poland. As Díaz-Cintas (2004a: 26) argues, "[n]orms are a very successful concept in the study of translation because they provide a clear objective to the research and direct the translation scholar to what needs to be found and analysed". The study of norms also helps to concentrate the research on identifying what really happens when translating, thus avoiding diversions on theoretical conjectures that do not reflect real practice (*ibid.*). The aim here has been to elicit the personal opinion of subtitlers as to what they perceive to be the nature of the norms that dictate their professional practice and, subsequently, to gauge to what extent these norms can be identified in the SDH files used in the corpus. As norms change over time, the study also seeks to outline the similarities and differences between the norms operating in the early stages of SDH in Poland and those found more recently. Two distinct historical periods are, therefore, taken into account: (1) the beginning of SDH in the country, from 1994 to 2010, and (2) from 2011, when legal regulations came in concerning the provision of SDH, until 2017 when the last subtitle files were collected.

The study draws primarily upon the methodology described in Chapter 2. Data collected from both the interviews with the practitioners and the subtitle files are organised according to the principal characteristics of SDH defined in Chapter 5, namely: (1) subtitle display rates, (2) extent of editing and (3) the written representation of extra- and paralinguistic features. The various norms described in the theoretical part of the thesis are also outlined in this chapter. Table 10 below contains the main parameters of SDH, which are analysed in the following pages and establishes a link between them and the different types of norm:

Subtitle display rates	Toury's operational norms (matricial) Pedersen's expected reading speed
Editing	Toury's initial norms and operational norms (textual-linguistic)

	Chesterman's professional norms
Extralinguistic features	Toury's initial norms Chesterman's professional norms (accountability, communication)

Table 10: SDH characteristics and relevant Translation Studies norms

The relationship between Toury's (1995), Chesterman's (1997) and Pedersen's (2011) norms and the various SDH parameters is explored in more detail below in the sections in which the results are detailed and in the discussion part of the current chapter.

6.1 Methodology

The investigation revolves round two main research tools: personal interviews with professional subtitlers and an in-depth analysis of a set of SDH files. The interviews provide a subjective view on the part of the practitioners concerning the professional norms laid down by Chesterman (see Chapter 2). In turn, a detailed examination of the files helps to shed light on actual subtitling practice and offers a comparison between the behavioural patterns observed in the translations and the subtitlers' subjective answers to the interview questions. Using these two methodological approaches allows for a certain degree of corroboration of the results and a deeper understanding of the evolution of SDH in Poland, contrasting the professionals' opinions with their actual practice.

6.1.1 Interviews

The interviews conducted for the purpose of this study are semi-structured in nature, that is to say, even though the questions were prepared beforehand (Appendix 1), the method allowed for a certain degree of flexibility in terms of the sequencing of the questions and the follow-up queries. This type of interview proved to be successful in this research, judging by the positive feedback volunteered by the interviewees and their willingness to share information and offer help on matters and questions arising during the conversation.

Ethically speaking, the interviews can be categorised as 'service evaluation', that is to say they were conducted with people who deliver the SDH service in Poland in order to comment on its past and current state, but not with the aim of changing it. Therefore, in accordance with University College London requirements, no official approval by an ethics committee was necessary. Furthermore, the interviewees were informed that all the data received during the interviews would only be used for research purposes, specifically in the doctoral dissertation written by the interviewer at University College London on the topic of the history of subtitling for deaf and hard-of-hearing viewers in Poland. Some participants requested the final version of their answers – which they received after their interview – so as to verify that the information they had shared during our Skype conversation had been properly transferred onto paper, and to confirm that they were happy with the notes.

The ensuing sections focus on the information and feedback obtained during the interviews and their interpretation.

6.1.1.1 Participants

Ten professional subtitlers took part in the study, two of whom have worked on SDH since its implementation in Poland in the early 1990s. They are amongst the pioneering subtitlers who triggered the development of SDH and, on the basis of their many years of experience, were responsible for the creation of the first standards for Polish SDH. Eight other respondents confirmed that they had started their SDH careers in or after 2011, by which date the provision of a certain percentage of SDH on television stations had become law. In addition to these participants, I interviewed one more person, not a professional subtitler but a TVP employee involved in the production of SDH since its beginnings and working mostly on technical issues related to subtitling. The information provided by this person was only taken into account when discussing technical matters, such as the length of the lines, the display rate of the subtitles, the use of colours, the limitations of analogue technology, the switch over to digital and the like.

The participants had all graduated from universities with higher education degrees. The two subtitlers, who were amongst those who started the initial provision of SDH in Poland, had degrees in Polish Studies and had then completed their education with a postgraduate degree in Journalism Studies. Coincidentally, one respondent who had begun working in SDH after 2011 had also graduated in Polish Studies and then proceeded to complete his postgraduate studies in AVT. Six participants were Master of Arts (MA) graduates in Applied Linguistics, three of whom then moved on to complete additional postgraduate studies in AVT. One participant had obtained a degree in Modern Languages. In accordance with their educational levels, those with a foreign language background had also worked in the field of interlingual subtitling.

All participants but one affirmed that they prepared SDH for foreign films from the Polish soundtrack as, in Poland, such films are usually voiced-over first and then the SDH are created on the basis of the voiced-over track (see Chapter 3 and Section 6.2.2.1).

Three people had completed their postgraduate studies in AVT where SDH was one of the modules. Another individual had finished a module on interlingual subtitling and one on SDH during their postgraduate studies. One of the participants had gained their training in the basics of interlingual subtitling during a university exchange programme abroad. Respondents, who had started working on SDH, or more generally in subtitling, before courses and studies on these topics were widely available, confirmed that they had mastered the skills of the trade on their own or with the help of established professionals. Of these, two had received training in-house, while the others were self taught, had read the clients' guidelines, asked more experienced professionals and had then tried it out for themselves. Some of the interviewees mentioned that, in an attempt to improve the quality of their work and given the dearth of academic material available in Polish, they had resorted to studying guidelines and style sheets from other countries with more of a tradition in the field of media accessibility, like the UK. This had given them the opportunity to familiarise themselves with professional practice and research issues and new

developments in the field. All this shows their devotion to the field and their interest in creating quality subtitles.

When asked about how they had started out in SDH, two of the participants stated that they just happened to have been working in a newsroom in Teletext at the time and transferred to working in SDH when the television station started providing the service. Four participants were introduced to SDH through AVT postgraduate studies or Continuing Professional Development (CPD) courses and workshops on subtitling. One of these participants became involved with accessibility groups during their studies and another respondent confirmed that their previous contact with people with sensory disabilities had motivated them to move into this field. One of the interviewees started preparing interlingual subtitling for film festivals during their postgraduate studies and another was already working at a university when she started preparing SDH. A rather telling confession came from one of the individuals, who stated: “I was irritated by the bad quality of the subtitles for deaf and hard-of-hearing audiences. As I had been working in dubbing, I enjoyed describing sounds. I knew how to do it”.

Regarding the distribution medium, participants were given the option of choosing more than one answer. As some of them worked in more than one medium, the results are as follows:

- public service television (TVP) – five people
- private television stations – nine people
- DVD – six people
- Theatre – three people
- Festivals – one person
- Live events – one person
- NGO – three people

In the case of the cinema, screenings with SDH are usually organised by NGOs. The same subtitle file is often released on DVD if the NGO is coordinating the whole process.

Professional norms and the participants' responses

The interviewees' responses also give an insight into how professional norms are used, including accountability, communication and relation norms, as noted by Chesterman (1997) and discussed in Chapter 2. Accountability norms refer to the fact that subtitlers have a responsibility not only towards the commissioner, but also towards their viewers, which sometimes may be quite different. The results of the interviews reveal that professionals do not usually have any contact with their audiences and, if they do, they are limited to after-show meetings in cinemas or theatres organised by NGOs. On occasions like these, and if subtitlers so wish, they can join the group and ask for ad-hoc feedback. Alternatively, some of them get in direct contact with deaf and hard-of-hearing friends or colleagues so that they can ask them the type of solutions they would prefer. Subtitlers, who worked in SDH at the very beginning while still learning the trade and developing the service, acknowledge that they made a conscious effort to get in touch with professionals in deaf education and viewers themselves by setting up blogs about SDH, enabling the target audience to share their comments and feedback on the available subtitles. One of the respondents stated:[24]

> We were in touch with Prof. Szczepankowski[25]. […] When the blog[26] started, viewers usually complained that a programme was not shown with SDH. […] Sometimes there were comments about editing subtitles, that there was too much editing. I started reading fora for hard-of-hearing, such as ONSI. They wrote that they did not want any colours or anything, just verbatim subtitles. And more subtitles.

All such undertakings were, and continue to be, totally dependent on the goodwill of individual subtitlers and are normally not promoted or supported by the commissioners of the service. Hence, due to the time-consuming nature of

[24] All translations from Polish are mine unless otherwise indicated.

[25] Expert in deaf studies in Poland and the creator of the Polish Signed System, used in deaf education.

[26] In the early stages of SDH on television, subtitlers led a blog on the TVP website where viewers could share their comments and suggestions on subtitled audiovisual materials.

these initiatives and the lack of financial incentive to get involved in them, such endeavours have ceased to be common practice amongst subtitlers in the 2011+ period – an evolution that nowadays has led to minimal or no communication between the creators and the recipients of SDH.

The situation is somewhat different concerning accountability towards the commissioner. Here, subtitlers claim to have clear guidelines on what is expected of them in terms of the parameters of the subtitle files that they have to deliver. Some of the respondents stated that, at times, commissioners, especially small companies, are not familiar with professional standards in Poland and ask subtitlers to complete the assignments according to their own knowledge and expertise.

All this would suggest that, perhaps unsurprisingly, there is more responsibility on the part of the subtitlers towards their clients than towards the audience. It seems that if viewers would like to foster more interaction with the providers of SDH and enact some change, particularly concerning quality issues, then the solution might be for them to contact the commissioners of the service directly with their feedback and requests, rather than the actual translators. They may stand a chance of influencing them to revisit their SDH guidelines and adapt them to better suit the audience's needs and expectations. However, it is very difficult, if not impossible, to find a dedicated means of contact that could be advertised on the TV channel webpages as it is done in some other countries. Although there are email addresses for viewers, these tend to be for general enquires and are not specifically dedicated to accessibility services. This state of affairs contrasts sharply with what happens with other international TV providers like the BBC, which has a dedicated email account to which viewers can send any comments, compliments, complaints or requests related to accessibility.

Chesterman's (1997) communication norm, which aims to ensure the conveyance of the messages between the creator/producer and the intended recipients, is usually affected by the lack of contact between the subtitlers and their audiences, as explained above. In their attempt to ensure that they provide

a service that helps deaf and hard-of-hearing people enjoy audiovisual media as much as hearing people, professionals tend to rely only on what they know about their target viewers' needs and expectations from the limited research available or their own educational background. In the case of SDH the communication norm relates to the conveyance not only of dialogues, but also sound effects, music and other extra- and paralinguistic elements, that is to say the whole of the audiovisual material creator's intended meaning. Communication works on many different levels. Here, the subtitler needs to guess how the creator wanted his viewers to understand the programme, to choose the most important sounds, decide on the most significant messages and render them in subtitles. These can be edited out or transferred verbatim, an issue that is addressed in the ensuing parts of this chapter.

Finally, with regard to Chesterman's (*ibid.*) relation norms, the relationship between the ST and TT and the commissioner's requirements and viewers' needs, the interviewees claimed that they pay close attention to aspects such as the type of media that they are asked to work on, the clients' requirements and the needs of their target audience. Theoretically, this knowledge was gleaned in part from their training programme in subtitling and, in part, from continuous practice and, whenever possible, from feedback provided by the audience. However, if they did not have any meaningful communication with the viewers, it was difficult to ascertain the extent to which they might have found it useful.

All this information shows the way in which translation norms relate to subtitlers' work and reveals in what way they are reflected in the professionals' feedback from the interviews.

6.1.1.2 Structure

Following the characteristics of the semi-structure interview presented in Chapter 2, many questions asked during the meetings with the subtitlers were open-ended (see Appendix 1). This was the subtitlers were not led to a specific answer. The interviewees were given the opportunity to describe their

experiences in detail, often leading to other related questions from the interviewer. The interview questions were divided into six parts: (1) demographic profile of the participants, (2) general questions about SDH and the professional environment of subtitlers working in SDH, (3) reading speeds and display rates, (4) editing of dialogue, (5) extra- and paralinguistic information, and (6) other information. Parts 3, 4 and 5 elaborated on the principal SDH characteristics, the main focus of this research. Recurrent patterns and norms in these three areas were also observed and analysed in real practice thanks to a corpus of professional SDH files. Two distinct parts of the set of interview questions were developed, one related to the beginnings of SDH provision in Poland in the 1990s, and the other with the aim of evaluating the current situation.

Despite the fact that the interviews were designed with a clear structure and followed a predetermined set of questions for discussion, the actual questions allowed for a certain degree of flexibility. They were therefore often asked in a different order so that they could be adjusted to follow the train of thought of each interviewee.

In general, the questions motivated the subtitlers and prompted them to talk about their experiences in the field of SDH. For instance, some of the questions were worded to elicit rather specific information, as in “what is the maximum subtitle presentation rate that you apply when creating subtitles?”. Such questions could, however, easily lead to others, thus helping build a more detailed picture of the professional situation, with questions such as ‘why that particular rate?’, ‘with what type of program?’, etc. A substantial wealth of factual data was thus collected, and the respondents were also given the opportunity to share their experiences of working for different clients and on different projects by answering clarifying follow-up questions.

6.1.1.3 Procedure

Before the actual interviews took place, I had sent the potential participants information about the research: my short biography together with the details of

where I studied, the subject matter of the dissertation and the nature of the tools and materials used to collect data for the investigation. They also received practical information about the interview, including its expected duration and the type of questions that they could expect, namely differences between SDH and interlingual subtitling, subtitle presentation rates, the importance of editing and the role of extra- and paralinguistic features in SDH. The respondents were also informed that, if they had any doubts about the interview process, I would be more than happy to answer them by e-mail before the actual conversation.

Some preparation was required before the interviews took place, such as checking that the recording equipment worked properly, care with personal presentation especially in face-to-face interviews, and making sure that the setting was as suitable as possible. As the interviews were conducted via Skype, the necessary steps were taken before each of the conversations to check that the internet connection and the software were working properly. Special attention was also paid to the physical setting to make sure that the environment was distraction-free. As soon as the connection was established, the interviews started by my thanking the interviewees for taking their time to talk to me and were followed by a short, friendly chat that helped create a positive atmosphere for the duration of our conversation. Next, I gave them a brief reminder of the purpose of the interview. As I had contacted all the participants by e-mail before our Skype interview, they already had a general idea concerning the research. We then moved on to the main part of the interview in which the subtitlers shared their experiences. At the end of the interview, all the participants were asked whether there was anything else they believed could be beneficial to the researcher regarding their work. Most interviewees also stated that they were very happy for me to contact them for further information.

The interviews were not recorded, as some of the participants felt uncomfortable about that and preferred me to take notes during the discussion instead. For consistency's sake, the same approach was adopted for all the interviews. While the participants were talking, I typed their answers and revisited the data again straightaway after each interview to add any other

information I might have missed but could still remember from our conversations. Taking detailed notes during the interview and skipping the recording and transcribing phases were largely possible because of the nature of the interview, as some of the questions required factual information that was easy to note down. All the answers were later grouped according to the six main sections of the interview. In this way, I ensured that I would have easy access to the data I needed to analyse at a later stage. All the interviews went very smoothly, with the participants eager to help in the project and stating that they looked forward to reading the results of the research.

6.1.2 Subtitle files

Following Díaz-Cintas's (2004a) suggestion that normative behaviour can be easily observed if the focus is placed on subtitle files produced by one TV channel, distributor, or professional, this research was initially going to deal with the material produced by the Polish public television station TVP. However, for reasons of comparison, the corpus was expanded to contain files from private television stations and the DVD and NGO industry. The reason behind such a change of approach was that a more varied range of resources could potentially provide a more representative overview of SDH norms in Poland.

6.1.2.1 The corpus

All subtitle files collected for the purpose of the study were received in .stl .srt or .ezt formats and could be easily opened with the specialist subtitling software used for the analysis, EZTitles. The corpus consisted of 131 files in total, divided into two periods: pre-2011 (from the inception of SDH provision in 1994 to 2010) and from 2011 onwards (the latest files received had been subtitled in 2017), referred to as 2011+. The division into the two periods was based on the fact that, in 2011, the compulsory provision of SDH on television stations became law in Poland (see Chapter 4). Eighteen subtitle files from the corpus were further analysed together with the corresponding video materials to contribute to the discussion on editing and extra- and paralinguistic elements in Polish SDH. The number of the videos was limited due to availability of the AVT

materials, which were kindly provided by subtitlers or whenever possible, accessed online.

As regards genres in the sample received, there are feature films, documentaries and TV series. All the pre-2011 files were secured from the public service television, TVP, as it was the only broadcaster providing SDH on Polish television at the time. Subtitle files from the period 2011+ were obtained from TVP as well as from private stations such as Polsat, TVN, Focus TV, TVPuls, and Canal+. For reasons of comparison, a sample of files produced for the dissemination of NGOs' activities and for distribution on DVD was also included in the study. Some NGOs create audiovisual material that is then released on DVDs, with SDH produced by the DVD publishers, while some others prefer to stream the films online with their own SDH files. The DVD-NGO section in the corpus of my study contains both types of file.

Table 11 below illustrates the distribution of the SDH files that form the corpus of the current study, taking into consideration the period from which the files come, the medium for which they were created and the original language of the film:

Media		Pre-2011	2011+	Total
Public TV				
	Polish productions	24	27	
	Foreign productions	5	4	60
Private TV				
	Polish productions		27	
	Foreign productions		14	41
DVD-NGO				
	Polish productions		24	
	Foreign productions		6	30
Total		29	102	131

Table 11: SDH files from the corpus of the study

As the files were obtained thanks to the courtesy of television stations and individual subtitlers, the corpus constitutes a convenience sample of SDH, that is to say, they were received from professional subtitlers and companies willing to send their files for research purposes. It also meant that the files they sent

were the ones that they were willing to share, had access to, etc. This is the reason why the different criteria are not evenly distributed (see for instance the division into Polish and foreign files). However, in terms of the overall number of files representing different media, the corpus stands out as a good basis from which to carry out an informative analysis of the three main SDH characteristics discussed in the study: subtitle display rates, degree of editing and the representation of extra- and paralinguistic elements.

6.1.2.2 Procedure

Information on all the collected subtitle files – the title of the film, year of production, name of director, genre, year of subtitling and the media type and name – was collated in a Microsoft Excel file (see Appendix 2). The subtitle files making up the corpus were delivered in three different subtitling formats: .srt, .stl, and .ezt. As mentioned above, they were analysed using the professional subtitling software EZTitles, where preferences applied to create the subtitles could be tracked, for example subtitle display rate, layout of subtitles, and typographical features such as the use of colours and italics. In addition, information on the actual date on which the subtitles were produced could also be viewed, but only in .stl and .ezt formats (EZTitles), as. srt files do not display the date on which the subtitles are created. Most of the .srt files were received from an NGO that had started running its online service for deaf and hard-of-hearing audiences as well as blind and partially sighted people back in 2015.[27] Therefore all those subtitle files belong to the 2011+ period.

Excel software was then used to conduct further analysis on subtitle speed. The analysis consisted of the following stages:

1) Export of files from EZTitles software into an Excel spreadsheet. The information exported included the time in, the time out and the duration of

[27] For the purposes of statistical analysis, the date of 2015 (the year the NGO started) was inserted next to the subtitle files that had no date found in the .srt files.

each subtitle, as well as the text of each and every subtitle included in each of the programmes;

2) Another Excel file was created for each audiovisual production. First, the duration of each subtitle was converted to milliseconds. Next, the number of characters per subtitle was calculated with an Excel formula, which excluded any empty spaces at the beginning and end of each line. Then, the number of characters in each subtitle was divided by its duration in order to calculate the subtitle display rate for each of the subtitles;
3) The duration of each subtitle, the number of characters per subtitle and the display rate of every subtitle were collated in a separate Excel file in order to import the information into the SPSS statistics software. Thanks to this program, the average duration of each subtitle, the mean number of characters as well as the average subtitle speed were calculated for each of the audiovisual productions;
4) The information for all 131 programmes was then collated in one Excel file (see Appendix 3) and coded for further statistical analysis in SPSS. The results of the analysis are presented below in Section 6.2.1.2.

A sample of the subtitle files was investigated alongside the respective video files in order to carry out an analysis of the degree of editing that had taken place (see Appendix 4) as well as the representation of extra- and paralinguistic features in SDH (see Appendix 5), both from the pre-2011 and the 2011+ periods. The number of films watched with SDH subtitles was limited to 12 so as to ascertain the levels of editing, and 18 (the same 12 plus another 6) so as to carry out the analysis of the way in which the extra- and paralinguistic elements were reflected in the subtitles (see Table 12). The results and discussion of this investigation are presented in Section 6.2.2.2 and Section 6.2.3.2.

In addition, subtitles from each film were collated in one Excel file (Appendix 6), where subtitles with more than two lines were counted and their percentage was calculated. The results were presented according to the period (pre-2011 and 2011+).

	Titles of films watched with SDH	Year of SDH creation	Language of the film	Watched for editing analysis	Watched for extra- and paralingustic analysis
pre-2011 period	Jańcio Wodnik [Johnnie Waterman]	1994	Polish	✓	✓
	Wildflower	1994	Foreign		✓
	Wierna rzeka [Faithful River]	1995	Polish	✓	✓
	Tobruk	1995	Foreign		✓
	Szaleństwa Panny Ewy [Follies of Miss Eva]	1996	Polish	✓	✓
	Chłopaki nie płaczą [Boys Don't Cry]	2009	Polish	✓	✓
	Miłość nad Rozlewiskiem [Love at the Lake]	2010	Polish	✓	✓
2011+ period	Sto minut wakacji [One Hundred Minutes of Holidays]	2011	Polish	✓	✓
	Material Girls	2011	Foreign		✓
	Zdjęcie z papieżem [Photo with a Pope]	2011	Polish	✓	✓
	1000 Ways to Die	2012	Foreign	✓	✓
	The Good Shepherd	2012	Foreign		✓
	Dog Whisperer	2013	Foreign	✓	✓
	Kamasutra	2013	Polish	✓	✓
	Le Tout Nouveau Testament [The New Testament]	2016	Foreign		✓
	Lalaland	2017	Foreign		✓
	Pokot [Spoor]	2017	Polish	✓	✓
	Sztuka kochania [The Art of Loving]	2017	Polish	✓	✓

Table 12: Films watched with SDH for editing as well as extra- and paralinguistic purposes

In the current study, the analysis dealing with the degree of editing practised in the subtitles was only conducted on the basis of the intralingual files, that is to

say the Polish soundtrack to Polish written subtitles. As stated before in this chapter, Polish SDH is usually created for foreign productions from the Polish voiceover track. As I did not have access to all the voiceover tracks, a fact that is indicated by the absence of the symbol ✓ in Table 12 above, some foreign films could not be analysed from an editing perspective.

6.1.2.3 Design

As one of the main goals of the study was to analyse the changes in subtitle display rates before and after 2011, the first **independent variable** I defined was:

1) time, with two conditions, namely subtitles created before 2011 (pre-2011) and those produced from 2011 to 2017 (2011+);

I also wondered if subtitles were dependent on whether the film was originally produced in Polish or a foreign language. Therefore, the second independent variable was:

2) the original language of the film, with two conditions: films in Polish vs. films in a foreign language.

Finally, as I was also interested in potential differences between media, the third independent variable in the study was:

3) the medium, where I analysed three types of media (public TV, private TV and DVD-NGO).

Having defined the factors that might affect the way the subtitles were created, I formulated the factors of what exactly would be measured in the study, namely the **dependent variables**:

1) subtitle presentation rate, calculated as the average rate for all the subtitles in a film, including both one-liners and two-liners;
2) number of characters per subtitle, calculated as the mean number of characters per subtitle in a given film; and

3) duration of the subtitles, presented in milliseconds (ms) and calculated as the average duration of a subtitle in a given film.

As all these dependent variables were interrelated, in order to calculate the presentation rate, both the number of characters and the duration of subtitles needed to be accurately measured. A closer analysis of the number of characters and the duration of subtitles over the years gave me an insight into how they both influence the increase or decrease of subtitle speed.

Statistical analyses (*t*-tests and ANOVA tests) were conducted mostly for the purpose of discussing the evolution of norms related to the various subtitle display rates. This information also fed into the discussion on the changes to the degree of textual editing over the years, as well as on the exploration of the representation of extra- and paralinguistic features encountered in the SDH files.

6.1.2.4 Hypotheses

As people with hearing problems have traditionally been believed to display poorer reading skills than their hearing counterparts (Jensema 1975, Jensema and Trybus 1978, Conrad 1979, Powers 1999, Cambra *et al.* 2009), and they are supposed not to be accustomed to reading fleeting text onscreen, lower presentation rates were used at the beginning of SDH provision so as to give deaf and hard-of-hearing people more time to read the subtitles comfortably and enjoy the images (Jensema and Burch 1999; Baker *at al.* 1984). Over the years, though, in many countries around the world display rates in interlingual subtitling have increased (Ivarsson and Carroll 1998; Pedersen 2011) due to the fact that subtitlers needed to incorporate more dialogue in their translations, and each of the subtitle lines can accommodate an expanding number of characters (*ibid.*). As Szarkowska and Gerber-Morón (2018) note, it seems that viewers nowadays are able to keep up with increasing subtitle speeds. The situation is similar as regards SDH presentation rates. At the time of writing, one of the biggest streaming video-on-demand service providers, Netflix (2018), recommends 20 cps as the set display rate when producing English SDH.

These guidelines are the same for Polish SDH on Netflix. However, in Poland, ever since the inception of SDH in the country, Polish subtitlers have used 12 cps as a benchmark, especially when subtitling audiovisual productions that are to be broadcast by the public service TV. Nowadays though, some professionals report that, when creating SDH for other media, for example DVD, they may reach up to 15 cps.

Based on the above discussion, it is therefore expected that:

> **Hypothesis 1:** The display rate of the subtitles belonging to the pre-2011 period will be lower than that from the 2011+ period. If so, this would mean that the display rate has increased over the years.
>
> **Hypothesis 2:** Subtitles from the pre-2011 period will be characterised by a longer mean subtitle duration than those from the 2011+ period in an attempt to allow the audience more time to read them. Again, it is expected that there will be a decrease in the mean subtitle duration.
>
> **Hypothesis 3:** As there was more editing to subtitles in the pre-2011 period, individual subtitles from the beginnings of SDH in Poland will contain fewer characters than those from the 2011+ period. In other words, the mean number of characters per subtitle will be shown to have increased over the years.

The display rate of the subtitles has a direct impact on the degree of editing that takes place in SDH. In general, in order to maintain the synchronisation of subtitles with the characters' speech, lower presentation rates and shorter lines would mean more editing. Therefore it is expected that:

> **Hypothesis 4:** A higher degree of editing, with more text deletion, will be observed in the earlier period of SDH provision.

However, editing strategies do not only depend on the delivery of the original dialogue and the subtitle display rates. Target viewers' reading skills, as well as subtitlers' knowledge of SDH and understanding of their audiences, are factors

that can have an influence on editing. Based on these observations, it is predicted that:

> **Hypothesis 5:** Areas like syntax, vocabulary and style will be the object of heavier editing in the pre-2011 period than in the 2011+ period.

As regards the representation of extra- and paralinguistic elements in SDH, given the fact that in the early stages of SDH in Poland subtitlers were gaining their skills 'on the job', and that there was a clear dearth of reception studies at that time, it is anticipated that:

> **Hypothesis 6:** More heterogeneity and less standardisation will be evident in the pre-2011 period than in the 2011+ period as regards the descriptions of sound effects, music and paralinguistic elements.

6.2 Results and discussion

This section presents the findings obtained from the two data sources – interviews with professional subtitlers and commercial subtitle files –, which is followed by a discussion of the implications of these results. The analysis is divided into three distinct sections according to the three main SDH characteristics highlighted in this research: (1) subtitle display rates, (2) various editing strategies used by the subtitlers, and (3) the representation onscreen of any extra- and paralinguistic features. Finally, the conclusions and limitations of this study are outlined.

6.2.1 Subtitle display rates

The following subsections contain a discussion of the findings concerning the display rates of the subtitles in Polish SDH, taking as the main research sources the statements provided by the various professionals during the interviews, as well as the empirical data contained in the many subtitle files. By adopting this approach, I have been able to compare the views of the professionals with what they actually do in their practice.

The analysis of subtitle reading speeds has been conducted within the framework of Toury's (1995) operational norms and Pedersen's (2011) expected reading speed. According to the former, matricial norms, which are part of the operational norms, refer to the fullness of the translation. In the case of subtitling, this is closely related to the maximum reading speed expected from the audience watching a given audiovisual production. Thus, if subtitles are constrained by the maximum display rate considered to be appropriate for a particular audience, the subtitles will need to be condensed in some sort of way, thus affecting the fullness of the resulting translation. It is normally up to the professionals to decide what textual material can be spared in the subtitles in any given context – notably when the dialogue is verbose or the characters speak particularly fast – and ensure that the most relevant information is conveyed and communication is successful. Of course, agreeing on a standard maximum display rate to suit every member of the audience can pose problems, as people's reading skills vary enormously depending on their educational background and level of exposure to subtitling. Ideally, subtitlers should simply follow the guidelines provided by their clients, but, as the data from the interviews show, practitioners often do not receive any information in this respect and have to apply their own common sense.

6.2.1.1 Subtitle display rates: interviews

The interviewees confirmed that there was some variation in the maximum subtitle display rate. Most stated that they usually set it at 12 cps, though this could go up to 15 cps in certain situations if necessary, for example when subtitling programmes for DVD distribution. They confirmed that, in the final analysis, the decision regarding the appropriate display rate depended on the client, the distributor or the television station.

The majority of the respondents claimed that they preferred to start with a lower setting – 12 cps – and increase it to suit the client's recommendations if provided and when needed in the audiovisual production. Those who prepared subtitles for children's programmes declared that they used speeds ranging between 9 and 12 cps.

When asked why they used a certain subtitle speed, those working in SDH since the beginning claimed that 12 cps was the default setting in the FAB subtitling software used by TVP at that time, and they were happy to stick to that speed. Even if some clients allowed higher speeds – up to 15 cps – they often preferred to apply 12 cps as the maximum. Most interviewees, however, stated that the maximum speed they adhered to was either what was requested by the commissioners or the one that they were taught to use during their specialised courses. However, they also confessed that they did not quite know the reasons behind their choice of this particular setting.

According to their feedback, the maximum display rate also varied depending on the distribution channel. For one of the respondents, the standards for DVD were stricter than those applied at film festivals, where there is more flexibility. Another participant stated that the highest maximum speed s/he applies is the one recommended in the Netflix guidelines, which allows for up to 17 cps.[28] This standard seems to be applicable to both interlingual and SDH subtitles. When faced with the dichotomy of either observing the speed limit or creating subtitles as close-to-verbatim as possible, most professionals affirmed that adherence to the speed limit took priority. When confronted with the need to condense the original dialogue, they ultimately tried to abide by what they considered to be the golden rule, that is to say they only edited the text when there was no other alternative and in a way that they believed was the least noticeable to the viewer.

All in all, their responses showed that subtitlers tend to respect the clients' guidelines concerning the maximum subtitling speed. For historical reasons, 12 cps seems to be the benchmark right across the profession and is often applied even if the guidelines allow for a higher subtitle speed. Most subtitlers said that they try to create subtitles at lower speeds so that the target audience finds them more comfortable to read.

[28] As of June 2018, the current recommendation by Netflix (2018) is 20cps for SDH for adults, and 17cps for children.

6.2.1.2 Subtitle display rates: subtitle files

The subtitle display rate is calculated by dividing the number of characters in a subtitle by its total duration, so that the three values are inextricably connected. This section presents the results of the statistical analyses conducted on the three dependent variables – namely the mean subtitle display rate, the average subtitle duration and the mean number of characters per subtitle; this is followed by a discussion of the outcomes.

Analysis

The corpus of 131 SDH files, dating from the beginning of the service provision until 2017, shows that the mean subtitle speed for Polish SDH (including public and private television, and DVDs) is just slightly over 10 cps, as illustrated in Table 13 below.[29] This is the speed that is generally applied when subtitling children's programmes in Poland and appears to be on the low side. The mean number of characters per subtitle is 34.9, and the mean duration of a subtitle is 3,372 milliseconds:

	Subtitle presentation rate (cps)	Number of characters per subtitle	Subtitle duration (ms)
Mean	10.37	34.69	3,372
Minimum	6	21	2,194
Maximum	14	95	10,013

Table 13: Descriptive statistics of subtitle duration, number of characters per subtitle and subtitle presentation rate for all the films from both periods (131 films)

The analysis of subtitle presentation rates revealed that the Polish TVP film, *Jańcio Wodnik* [*Johnnie Waterman*], from the pre-2011 period, had the lowest subtitle presentation rate at 6 cps on average, while the 2011+ Polish DVD film, *Chłowiek z Żelaza [Man of Iron]*, contained 14 cps on average. *Powstanie Warszawskie [Warsaw Uprising]* was identified as the film containing the largest

[29] The term 'subtitle speed' is used interchangeably with 'subtitle presentation rate' and 'subtitle display rate'.

number of characters found in one subtitle (95 on average). This is due to the fact that, in the early stages of SDH in Poland, using more than two lines per subtitle was a fairly common occurrence (see Appendix 6). In this particular film, numerous instances of subtitles consisting of up to four lines can be found. On the other hand, the smallest number of characters per subtitle was found in a 2011+ Polish DVD film entitled *Krótki film o miłości [A Short Film about Love]*. Regarding subtitle duration, the film characterised by the shortest mean subtitle duration was a Polish DVD film subtitled in the 2011+ period, *Prostytutki [Prostitutes],* whereas the longest mean subtitle duration appeared in a pre-2011 Polish TVP film *Powstanie Warszawskie [Warsaw Uprising].*

As the first step in the analysis, histograms were produced in order to examine the distribution of data. In the case of the average subtitle speed, the data ranged from a minimum of 6 cps to a maximum of 14 cps, with the vast majority of films falling between 8 and 12 cps, as shown in Figure 52. No outliers were found.

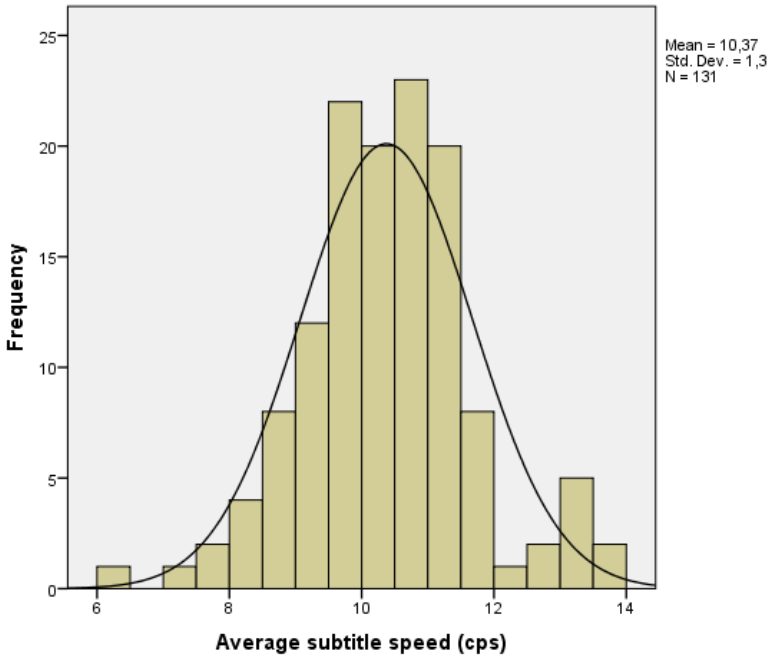


Figure 52: Histogram of average subtitle speed for all the films from both periods (131 films)

As far as subtitle duration was concerned, most subtitles lasted between 2 and 6 seconds, as illustrated in Figure 53:

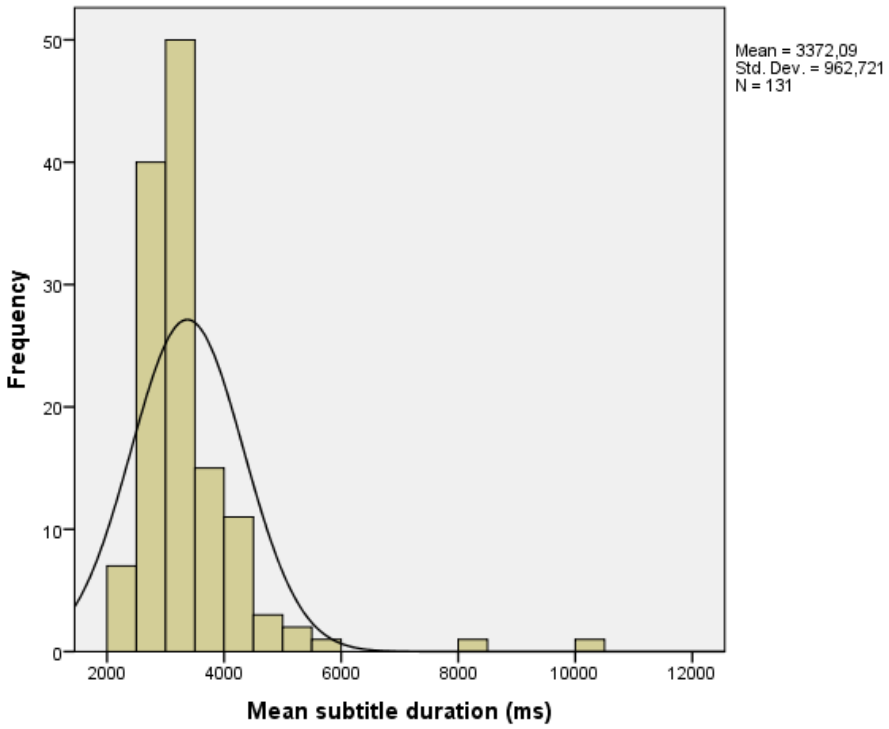


Figure 53: Histogram of subtitle duration for all the films from both periods (131 films) with two outliers

However, two films stood out from the mean and were classified as outliers: *Jańcio Wodnik [Johnnie Waterman]*, with an average subtitle duration of 8 seconds on screen, and *Powstanie Warszawskie [Warsaw Uprising]*, in which the average was 10 seconds. Since these two films might have skewed the overall results slightly, it was decided that the results should be recalculated without them (Figure 54):

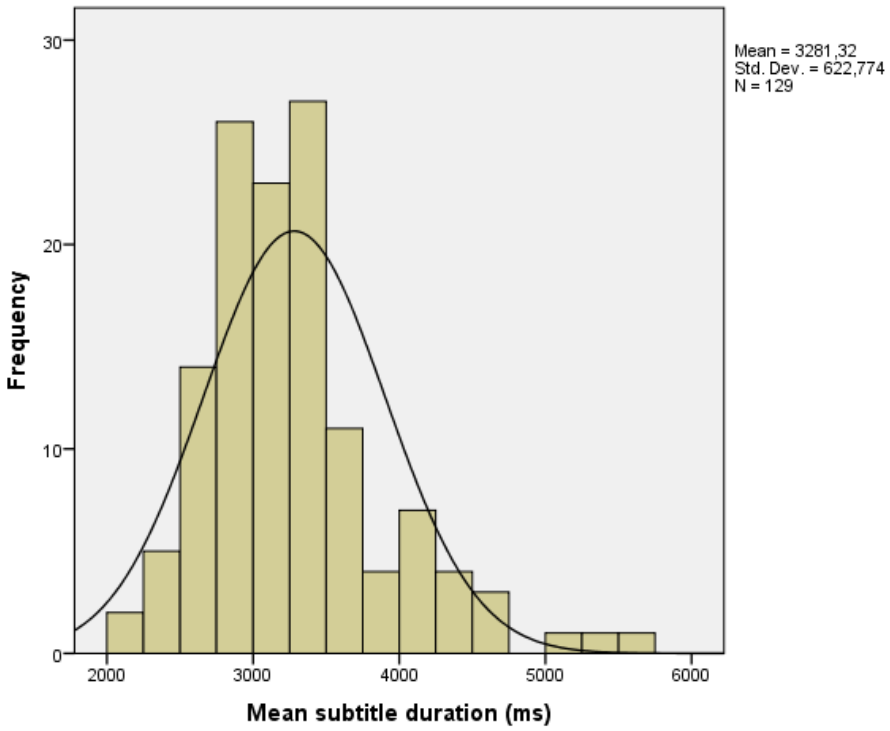


Figure 54: Histogram of subtitle duration for films from both periods (129 films), without the outliers

As far as the number of characters per subtitle was concerned, most files contained subtitles with an average of 20 to 60 characters, as illustrated in Figure 55:

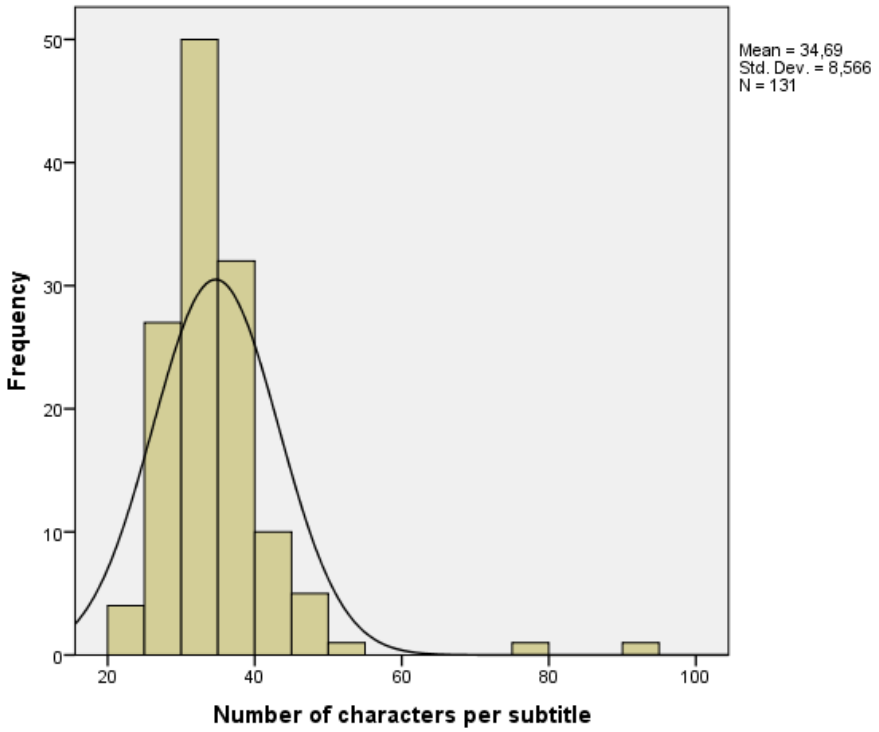


Figure 55: Histogram of characters per subtitle for all the films from both periods (131 films), with two outliers

Two films stood out, though: one with 78 characters per subtitle on average – *Wild Flower* – and one with 95 – *Powstanie Warszawskie [Warsaw Uprising]*. As with subtitle duration, both films were discarded from the analysis as outliers, leaving a total of 129 films for the analysis of the mean number of characters per subtitle, and a new histogram was produced, as shown in Figure 56:

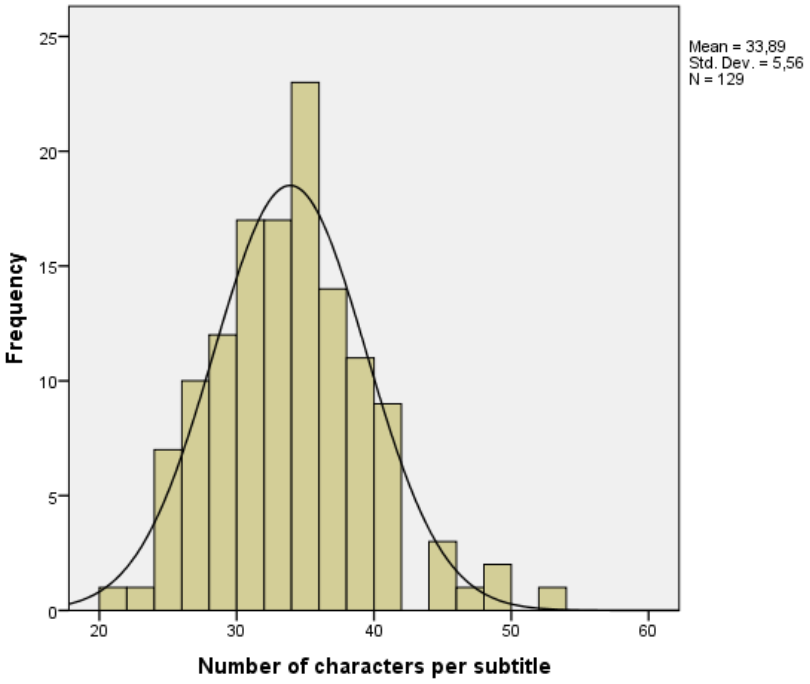


Figure 56: Histogram of characters per subtitle for films from both periods (129 films), without the outliers

The final corpus consisted of 131 films for the analysis of subtitle presentation rates, 129 films for the analysis of the subtitle duration and 129 films for the analysis of the number of characters per subtitle. Table 14 below presents the final collation of the mean, the maximum and the minimum values of the subtitle presentation rates, the number of characters per subtitle and the subtitle duration for all the films in the corpus:

	Subtitle presentation rate (cps)	Number of characters per subtitle	Subtitle duration (ms)
Mean	10.37	33.89	3,281
Minimum	6	21	2,194
Maximum	14	54	5,749

Table 14: Updated descriptive statistics of subtitle presentation rates (131 films), number of characters per subtitle (129 films) and subtitle duration (129 films) for films from both periods

When compared with the information contained in Table 13, and having discarded two of the films from subtitle duration analysis and two films from the examination of the average number of characters per subtitle, the mean values had not changed significantly; however, the maximum duration was now much lower at 5,749 milliseconds (Table 14), as opposed to 10,013 milliseconds (Table 13), and the maximum number of characters per subtitle was also very different at 54 (Table 14), as opposed to previous 95 (Table 13). Consequently, the range between the extreme values dropped to a duration of 3,555 milliseconds and 33 for the number of characters per subtitle (Table 14). The maximum values for both subtitle duration and the number of characters per subtitle still belong to films from the pre-2011 period, *Wild Flower* and *Jańcio Wodnik [Johny the Waterman]* respectively.

As the current study is diachronic in nature, the most interesting results were obtained when comparisons were made between our two periods. Table 15 below offers a comparative summary of subtitle presentation rates, number of characters per subtitle and subtitle duration:

	Subtitle presentation rates (in cps)		Number of characters per subtitle		Subtitle duration (in ms)	
	Pre-2011	2011+	Pre-2011	2011+	Pre-2011	2011+
Mean	9.22	10.70	38.15	32.76	4,038	3,080
Minimum	6	8	26	21	2697	2194
Maximum	13	14	54	45	5749	4222

Table 15: Descriptive statistics of subtitle duration, the number of characters per subtitle and subtitle presentation rate for the two periods: pre-2011 and 2011+

As we can see, the average subtitle presentation rates increased slightly over the years (from 9.22 cps to 10.70 cps), even though the range between the extreme values was not that different. The average number of characters per subtitle, on the other hand, has lowered from 38.15 to 32.76. This may be due to the fact that subtitlers now adhere to a maximum of two lines per subtitle as opposed to the pre-2011 period when three or more lines per subtitle were sometimes used. As the information collated in Appendix 6 shows, there were no instances of subtitles consisting of more than two lines in the files from the 2011+ period, whereas in the pre-2011 period we can observe the occurrence of subtitles with more than two lines in 11 films (out of 29). The percentage of subtitles with more than two lines in the pre-2011 period was calculated at 5.09%. This percentage is very low due to the fact that, as manual inspection of the films demonstrates, subtitlers created longer subtitles only at the beginnings of the service provision. Finally, the mean subtitle duration was lower in the films from the 2011+ period, decreasing by almost a full second, from 4,038 down to 3,080 milliseconds, which may be taken as an indication of increasing subtitle display rates.

Table 14 above shows the general values of all the files from the final corpus: 131 files for subtitle speed, 129 for the number of characters per subtitle and 129 for subtitle duration. A more detailed examination of the effects that all three independent variables – time, original language and type of media – had on the three dependent variables – average subtitle presentation rates, average number of characters per line and mean subtitle duration – is shown in the sections below in order to check whether the results are statistically significant. This is followed by a discussion of the results and a reference to the hypotheses stated earlier in the chapter.

Mean subtitle presentation rates

To assess whether the **time** when the subtitles were created has an effect on the subtitle presentation rates, an independent *t*-test was conducted with the time period (pre-2011/2011+) as the main independent variable. The results, contained in Table 16 below, show that time does indeed have a significant

effect on the subtitle presentation rates $p < .000$. In line with the initial predictions (Hypothesis 1), the mean subtitle presentation rates were significantly lower in the pre-2011 period ($M = 9.22$, $SD = 1.174$) than in the 2011+ period ($M = 10.70$, $SD = 1.140$):

	Subtitle presentation rates					
	N[30]	Mean (cps)	SD[31]	Sig.[32]	95% Confidence Interval lower	upper
				.000	-1.962	-1.006
Pre-2011	29	9.22	1.174			
2011+	102	10.70	1.140			

Table 16: Subtitle presentation rate indicators according to time

An independent *t*-test was conducted with the original language of the film (Polish/Foreign) as the main independent variable so as to assess whether the **original language of the film** has an effect on subtitle presentation rates. The results shown in Table 17 demonstrate that the language of the film had no significant effect on the subtitle presentation rates $p = .961$, meaning that the rates for domestic and foreign productions are very similar and that subtitlers do not differentiate the settings of subtitle display rates depending on the original language of the film:

	Subtitle presentation rates					
	N	Mean (cps)	SD	Sig.	95% Confidence Interval lower	upper
				.961	-.530	.557
Polish	102	10.38	1.328			
Foreign	29	10.36	1.217			

Table 17: Subtitle presentation rate indicators according to the original language of the film

[30] N – number of subtitle files analysed

[31] SD – standard deviation

[32] Sig. – statistical significance

A one-way ANOVA test was conducted with the medium (public TV, private TV, DVD-NGO) as the main independent variable in order to verify whether the distribution **medium** had an effect on the subtitle presentation rates, However, as public TV was the only provider of SDH in the pre-2011 period, it was decided that, in order to verify how the subtitle speed on public TV compared with other media, the test should be conducted for subtitles from the 2011+ period only. The results are shown in Table 18:

	Subtitle presentation rates			
	N	Mean (cps)	SD	Sig.
Public TV	31	10.21	.595	.014
Private TV	41	10.92	1.087	
DVD-NGO	30	10.91	1.467	

Table 18: Subtitle presentation rate indicators on public TV, private TV and DVD-NGO in the 2011+ period

As demonstrated in Table 18, the distribution medium had a significant effect on the actual subtitle presentation rates: p = .014. Post-hoc comparisons with Bonferroni correction confirmed that there was a significant difference between public TV and private TV (p = .023, 95% CI [-1.35, -.08]), with the latter showing higher presentation rates (M = 10.92, SD = 1.087) than public TV (M = 10.21, SD = .595). There was also a significant difference between the results obtained for public TV and those for DVD-NGO (p = .044, 95% CI [-1.39, -.01]), with DVD-NGO being characterised by higher subtitle presentation rates (M = 10.91, SD = 1.467), which, incidentally, were fairly similar to those found on private TV (M = 10.92), even though standard deviation was wider in the case of DVD-NGO. Despite the fact that subtitle speed on public service TV increased in the 2011+ period, it was still significantly lower than the subtitle presentation rates found on private TV or in the DVD-NGO groups.

Average number of characters per subtitle

To assess whether the **time** when the subtitles were created had an effect on the average number of characters per subtitle, an independent *t*-test was conducted with the time period (pre-2011/2011+) as the main independent variable. Time was found to have a significant effect on the number of characters per subtitle $p < .000$. Thus, the average number of characters per subtitle was greater in the pre-2011 period ($M = 38.15$, $SD = 6.552$) than in the 2011+ period ($M = 32.76$, $SD = 4.689$), as shown in Table 19:

	Average number of characters per subtitle			Sig.	95% Confidence Interval	
	N	Mean	SD		lower	upper
				.000	3.197	7.587
Pre-2011	27	38.15	6.552			
2011+	102	32.76	4.689			

Table 19: Indicators of the average number of characters per subtitle according to time

This was probably due to the fact that subtitles in the pre-2011 period sometimes had more than two lines per subtitle.

To test whether the **original language of the film** had an effect on the mean number of characters included in the subtitles, an independent *t*-test was conducted with the original language of the film (Polish/Foreign) as the main independent variable. As with subtitle presentation rates, the language of the film had no significant bearing on the number of characters per subtitle $p = .987$, as shown in Table 20 below:

	Average number of characters per subtitle			Sig.	95% Confidence Interval	
	N	Mean	SD		lower	upper
				.987	-2.378	2.340
Polish	101	33.89	5.638			
Foreign	28	33.91	5.369			

Table 20: Indicators of the average number of characters per subtitle according to the original language of the film

An independent ANOVA test was conducted in order to measure the effect of the distribution **medium** on the average number of characters per subtitle. As with the previous case where the effect of the distribution medium on subtitle presentation rates was measured, the test was conducted for the 2011+ period only. This was due to the fact that it was only public TV that delivered SDH in the pre-2011 period. The results can be found in Table 21:

	Average number of characters per subtitle			Sig.
	N	Mean	SD	
Public TV	31	32.67	4.466	.000
Private TV	41	34.61	4.347	
DVD-NGO	30	30.34	4.354	

Table 21: Indicators of the average number of characters per subtitle on public TV, private TV and DVD-NGO in 2011+ period

Table 21 above shows that the distribution medium had a significant effect on the average number of characters per subtitle $p < .000$. As shown by the Bonferroni post-hoc test, a significant difference was found between private TV and the DVD-NGO files only ($p < .000$, 95% CI [1.70, 6.84]), with the former containing, on average, a greater number of characters per subtitle ($M = 34.61$, $SD = 4.347$) than the DVD-NGO files ($M = 30.34$, $SD = 4.354$). The results show that subtitles on public TV have generally been getting shorter since 2011.

Mean subtitle duration

The results of the *t*-test show that time does indeed have a significant effect on the mean subtitle duration $p < .000$ (Table 22). The mean subtitle duration was higher in the pre-2011 period ($M = 4038.19$, $SD = 729.182$) than in the 2011+ period ($M = 3080.98$, $SD = 401.223$), probably because of the fact that, in the early period, some of the subtitles were made up of more than two lines and, hence, were kept on screen a little longer. This was not a consistent approach however, and the manual analysis of selected subtitle files revealed that there were some subtitles that consisted of two lines only and stayed onscreen longer than some of the three- or four-liners.

	Subtitle duration			Sig.	95% Confidence Interval	
	N	Mean (in ms)	SD		lower	upper
				.000	748.774	1,165.654
Pre-2011	27	4038	729			
2011+	102	3080	401			

Table 22: Subtitle duration indicators according to time

To verify whether the **original language of the film** had an effect on the mean subtitle duration, an independent *t*-test was conducted with the original language of the film (Polish/Foreign) as the main independent variable. The language of the film was not found to have a significant effect on the mean subtitle duration, $p = .110$ (Table 23) as, in general, there was little difference in the mean duration between Polish and foreign productions. The reason behind this may be that subtitles are usually created from the Polish audio rather than from the original soundtrack of the film.

	Subtitle duration			Sig.	95% Confidence Interval	
	N	Mean (in ms)	SD		lower	upper
				.110	-468.290	48.348
Polish	100	3234	609			
Foreign	29	3444	651			

Table 23: Subtitle duration indicators according to the original language of the film

To test the effect that the distribution **medium** had on the mean subtitle duration, an independent ANOVA test was conducted – again for the 2011+ period only – in order to elicit the differences in values between public TV, private TV and DVD-NGO. The results are shown in Table 24:

	Subtitle duration			
	N	Mean (in ms)	SD	Sig.
Public TV	31	3088	323	.232
Private TV	41	3147	318	
DVD-NGO	30	2982	543	

Table 24: Subtitle duration indicators on public TV, private TV and DVD-NGO in the 2011+ period

On this occasion, no significant effect of the distribution medium on the subtitle duration, p = .232, was found, demonstrating that the subtitles used on public service TV did evolve over time and are now displayed on screen for a shorter period than in the initial years. These findings show that the different media seem to be converging on this front, as nowadays there is less of a difference between them as far as average subtitle duration is concerned.

Discussion

The results presented above showed that the **time** at which the subtitles were created had a clear impact on all the dependent variables, that is to say there was a significant difference between the values found in the pre-2011 and the 2011+ periods in terms of average subtitle presentation rates, the average number of characters per subtitle and the mean subtitle duration. However, the effect size was not large: in terms of subtitle speed it increased by 1.48 seconds, in the number of characters per subtitle there was a decrease of 5.39 characters, and in terms of duration, a decrease of 0.958 second. This might have been due to the number of files used in the analysis. If more subtitle files had been examined, the effects size might have been greater.

It was also proved that the **original language** of the film had no effect on any of the dependent variables, which means that when SDH is created for foreign films, subtitlers follow the same standards in relation to subtitle speed, the number of characters per subtitle and the duration of the subtitles. This might be

because subtitlers usually create their SDH for foreign films from voiceover tracks in Polish, or because the norms are the same for the preparation of SDH for both Polish and foreign productions.

In terms of the effect that the different **media** channels had on subtitle presentation rates, there appeared to be significant differences between the films broadcast on public service TV and private TV, and between those shown on public TV and DVD-NGO. The type of media had an impact on the average number of characters per subtitle, with the most significant differences being between private TV and DVD-NGO. However, the media had no effect on the average subtitle duration in the 2011+ period in which a comparison between all three platforms (public TV, private TV and DVD-NGO) could be carried out. Such findings show that there is a fairly similar time duration for the onscreen display of subtitles in all types of media.

Subtitle presentation rates have increased over the years on public service TV from an average of 9.22 to 10.21 cps, even though they are still lower than on other media (the average for all the media in the 2011+ period was 10.70) so the gap is now much smaller. The results were in line with Hypothesis 1, which assumed that the subtitle speed would be higher in the 2011+ period. It is worth highlighting that, even though the increase was statistically significant, the average subtitle speed found on all platforms was still lower than 12 cps, a speed that continues to be heralded as the maximum display rate in Poland, even though some subtitles may occasionally exceed it. This situation has not changed since the introduction of SDH. However, as the analysis of the files showed, there were more films with higher than average subtitle speeds in the 2011+ period. This may be a direct response to deaf and hard-of-hearing viewers' demand for verbatim subtitling (Szarkowska and Laskowska 2014). In addition, people are more used to reading subtitles on a daily basis and can therefore read them faster onscreen (Szarkowska and Gerber-Morón 2018). The reasons behind this evolution can also be attributed to financial considerations, since producing verbatim transcriptions tends to require less time and effort. In this study, the use of Toury's (1995) concept of matricial norms, referring to the fullness of the translation, demonstrates that more

verbatim subtitling is practised nowadays, and less dialogue edited out. Another finding shows that in order to adapt to the expectations of the target viewers subtitles are now faster than they were before, also signifying a change in Pedersen's (2011) expected reading speed norms.

The various analyses conducted for this research show that subtitles on public TV evolved over time in the sense that their average **subtitle duration** decreased from 4038 ms in the beginning to 3088 ms in more recent times. This would indicate that they now stay on the screen for a shorter period of time, thus leading to a higher subtitle speed. This, in turn, resulted in a situation in which there are virtually no differences in terms of the average subtitle duration (currently 3080 ms) between the SDH offered on public service TV and other media. These findings confirm Hypothesis 2, which states that subtitle duration was higher in the pre-2011 period than in the 2011+ period, and that the difference is statistically significant.

The same applies to the average **number of characters per subtitle**: the subtitles shown on public service TV are now shorter than they were in the pre-2011 period by around 5.5 characters and similar in length to the subtitles used in other media, with the overall mean of characters per subtitle for all media in the 2011+ period currently at 32.76. These findings cancel out Hypothesis 3, which predicted that the mean number of characters per line would be lower in the pre-2011 period due to a trend for heavy editing. However, a closer inspection of individual files showed that some consisted of subtitles with three or more lines, whereas in the 2011+ period there was a consistent use of a maximum of two-lines, which in turn means fewer characters per subtitle.

A high degree of standardisation can be observed in subtitle speed and duration and the number of characters per subtitle. This is probably due to the fact that subtitlers often qualify from recognised subtitling courses offered at many universities in Poland and abroad and refer to the same guidelines, which are now also shared on the website of the Polish National Broadcasting Council (KRRiT 2016). Thanks to the growing body of research being conducted both nationally and internationally, we could argue that there is also more awareness

of what is happening in other countries, and that Polish subtitlers seem to be drawing inspiration from this and thus adhering to a universal set of 'global' standards, although further research will have to be carried out on this front and in different countries before firmer conclusions can be made.

6.2.2 Editing

As already discussed, editing is one of the defining characteristics of SDH and is closely related to and affected by subtitle speed. In most instances, the maximum subtitle display rate agreed for a given programme – whether it is 12 cps or 15 cps – is directly responsible for the degree of editing that needs to be carried out. This can be altered in cases in which the client has stipulated the need for special adapted subtitles, for example for children or for people learning the Polish phonic language. The following heuristic tools can be utilised to investigate editing: (1) Toury's (1995) initial norms and operational norms, in particular textual-linguistic norms, and (2) Chesterman's (1997) professional norms.

Toury's (1995) initial norms consist in identifying whether the resulting translation is closer to the source text and is then considered to be 'adequate', or is closer to the needs of the target audience, in which case it is deemed to be 'acceptable'. I would argue that the final text in the SDH subtitles that appear on screen should be both 'adequate' – in the sense that deaf and hard-of-hearing viewers seem to prefer verbatim subtitles that closely reflect the original dialogue –, and at the same time 'acceptable', making sure that all relevant sound effects are also conveyed, that the various characters are identified when necessary, and that the paralinguistic features are properly rendered onscreen so that target audiences have as much information about the programme as hearing audiences. When editing is carried out for special purposes, the tendency is to make the text more 'acceptable' and adapted more to the needs of the target viewers.

Toury's (*ibid.*) operational norms, especially his textual-linguistic norms, direct the interest of the researcher to the investigation of the actual textual make-up

of the target text. In the case of SDH, subtitlers should edit the subtitles only when necessary, because of spatial-temporal constraints, and they must make sure that the textual items and stylistic devices that are most suitable to the target viewers' understanding of the original production are maintained in the subtitles. If, for instance, they are deaf students learning to read Polish, the subtitles should be adapted accordingly, so that easier grammatical structures, simpler sentence constructions and more popular vocabulary are used, though this is an approach that some members of the audience might think controversial.

Chesterman's (1997) professional norms, described in Section 6.1.1.1, also ring true in the case of editing where subtitlers must navigate between the commissioner's requirements, the actual needs of the target viewers and the various spatial and temporal limitations.

The sections that follow offer an in-depth analysis of the interview questions and answers provided by the participants. They also draw on information contained in some parts of the subtitle files in an attempt to provide empirical evidence for the existence of certain editing norms in Polish SDH.

6.2.2.1 Editing: interviews

The optimal degree of editing in SDH is one of the most hotly debated issues in professional and academic circles, with some sectors of the audience and the industry preferring the production of verbatim subtitles. Researchers, on the other hand, tend to opt for some form of textual editing on the grounds that the target audiences struggle with reading and understanding verbatim subtitles in fast-paced audiovisual productions (see Chapter 5). Professional subtitlers realise that their subtitling output is constrained by spatial and temporal restrictions, and they are simply not able to provide verbatim subtitles at all times without compromising synchronisation between image and audio. Thanks to the various interviews with professional subtitlers, we can understand the editing techniques used in their subtitles better, in an attempt to provide a quality service for deaf and hard-of-hearing viewers.

In the early years of SDH in Poland, subtitlers edited files heavily, simplifying grammatical structures and vocabulary. They claimed that this work was more about interpreting film dialogue than transcribing the text. They adopted this approach after consulting teachers of the deaf, who advised them that people with hearing loss struggled with reading and would not be able to follow quickly changing subtitles or understand less frequently used expressions.

Professionals also left the subtitles onscreen for much longer than the actual dialogue exchanges taking place, a strategy that was intended to give viewers enough time to read the text comfortably, which, in turn, affected the synchronisation between written text and soundtrack. Over the years, and thanks to audience feedback, which was often expressed in open blogs and criticised heavily modified text, subtitlers started to move away from adapting the text towards more verbatim renditions. The approach to editing evolved from a traditional simplification of grammar and lexis to the deletion of redundant words and phrases to ensure synchronisation with visuals and sound. Another development was the close observation of the characters' lip movements so that deaf and hard-of-hearing people who could lip read were not frustrated with the potential lack of synchrony or linguistic parallel between dialogue and subtitles. In addition, some viewers expected verbatim subtitling because they had residual hearing and were therefore able to recognise some words.

These changes towards the use of more verbatim subtitles have proved reasonably popular and have continued ever since. In current practice, subtitlers avoid modifying the textuality of the original dialogue and, only when strictly necessary, do they resort to the deletion of redundant words or whole phrases in order to adhere to the maximum set subtitle speed. All the interviewees stated that they were aware that viewers demand verbatim subtitles and claimed that they try to keep the target text in the subtitles as close to the original dialogue as possible. Some even stated that, when necessary and feasible, they alter the timecode values so that as much content can be kept in the target text as possible, for example by leaving a subtitle onscreen for up to a second after a character has stopped speaking. This is only possible when no other speech is heard straight after the subtitle, and there is no shot or

scene change. The majority of the subtitlers claimed that they work in such a way that their output text is understood by their target audience, and that any changes are least noticeable, which accords with Chesterman's communication norm. When asked about any editing guidelines, the subtitlers working for internet stations stated that they usually receive them and that they tend to focus on rendering the original dialogue verbatim. Others referred to materials gathered during their studies and to other publicly available documents, such as the BBC's (2009, 2018) or Netflix's (2018) recommendations.

When questioned about the way in which the process of editing is affected by whether films are domestic or foreign, most participants confirmed that it is considerably easier for them to edit the dialogue in foreign productions as, on these occasions, viewers do not rely on lip reading or residual hearing. They added that, in the case of foreign films, subtitlers can work in various scenarios: (a) they receive a dialogue list in the source language, in which case they need to translate it into Polish first and then adjust the translation for SDH, (b) they are given the interlingual subtitle file in Polish with the corresponding spotting, to which they need to add any relevant paralinguistic information, or (c) they get a voiceover script already translated into Polish and are requested to do the spotting. Of these three options, the latter seems to be by far the most common. When working with Polish films, however, they are hardly ever given any dialogue lists or scripts, which means that they need to create the subtitles from scratch, directly from the Polish audio.

As subtitlers usually prepare their SDH for foreign films based on a voiceover script that has already been translated into Polish, some editing has already been done. Nonetheless, a few professionals with knowledge of the original language claim that quite often they need to add parts in the subtitles that have been deleted during the voiceover process, but that are relevant for the understanding of the plot by the deaf and the hard-of-hearing.

6.2.2.2 Editing: subtitle files

Following on from the feedback given by professional SDH subtitlers on the implementation of editing strategies in their practice over the years, this section concentrates on the presentation of the analysis of editing strategies in selected SDH files (Appendix 4). Selected issues such as the number of lines per subtitle, deletion, reformulation, neutralising language and neutralising style were recorded in Excel file for each of the 12 films (5 from the pre-2011 period and 7 from the 2011+ period). Next, the results were collated in the form of tables and charts to illustrate the differences in editing in both periods. Occurrences of editing strategies for each analysed film are presented below in Table 25. They include:

- deletion (words, phrases and sentences)
- reformulation (e.g. changing the word order, adaptation of the whole phrase or sentence, simplifying complex sentences, converting rhetorical questions to statements, etc.)
- neutralising language (using synonyms of words, simplifying metaphors, etc.)
- neutralising style (simplifying style by using neutral contemporary words and phrases)

Film	Period	Deletion	Reformulation	Neutralising language	Neutralising style
Jancio Wodnik	Pre-2011	106	0	1	1
Wierna rzeka		265	106	76	36
Szalenstwa Panny Ewy		193	73	50	37
Chlopaki nie placza		504	80	28	1
Milosc nad rozlewiskiem		168	1	0	0
Sto Minut Wakacji	2011+	265	10	9	0
Zdjecie z papiezem		38	0	8	0
1000 Ways to die		16	8	2	0
Dog Whisperer		3	2	1	4
Kamasutra		350	38	12	0
Pokot		164	12	8	0
Sztuka kochania		356	35	4	2

Table 25: The instances of editing strategies in analysed films

Figure 57 below shows the distribution of each strategy in films from the pre-2011 period and the 2011+ period.

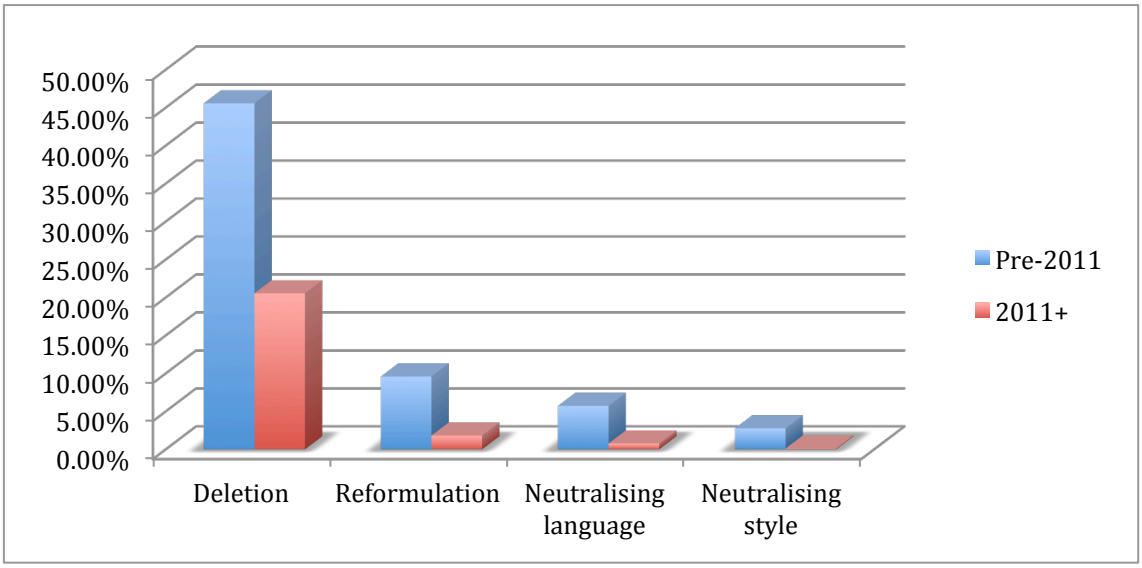


Figure 57: The instances of editing in films from the pre-2011 and 2011+ periods

The results show that the pre-2011 period was characterised by a significantly larger number of all types of editing occurrences than the 2011+ period. Deletion, even though it was used more often in the pre-2011 period, is still the most popular editing strategy in the 2011+ period. Reformulation, on the other hand, as well as neutralising language and style are only sporadically used nowadays.

Examples of editing strategies in both periods are presented and discussed in detail in the following sections of this chapter. The topics involve the effect of editing on syntax and lexical items, as well as on stylistic changes. The analysis is followed by a discussion on the implications of editing in Polish SDH.

Syntax

Before discussing the editing of syntactical structures, it is important to refer to the matter of the maximum number of characters per subtitle, as well as to the maximum duration of time that subtitles can stay on screen (see Section 5.1.3.2) as this has a direct impact on the amount of editing that needs to be

carried out. Subtitles that are shorter in line length and exposure time usually require a larger amount of editing of the characters' speech.

Initially, subtitles did not always follow the 'six-second rule'. We can see from the subtitle files that some two-line subtitles often stay on the screen for much longer, sometimes even up to 13 seconds (see subtitles 11, 21, 20 in Example 1 below), while others, that are made up of two- or three-liners and contain a greater lexical volume stay on screen for a shorter duration of time (see subtitles 20, 26 in Example 1):

Film: ***Jańcio Wodnik [Johnny Waterman]***	
Dialogue	**Subtitle** 11 (13:00)
Wy tam, na wsi, do was mówi dziad, sram na was. [You there, in the countryside, to you speaks the old man, I shit on you.]	Wy tam, na wsi, do was mówi dziad – sram na was.[33] [You there, in the countryside, to you speaks the old man – I shit on you.
Dialogue	**Subtitle** 21 (11:21)
Zajeździł, zamęczył, kałduny jej mitręgą napychał a jak zaczęła bielmem zachodzić i popuszczać wodę spod ogona – to wygnał jak psa. Jeszcze przedtem boki orczykiem obił, bo zwierzę niewiele rozumiało, dokąd ma iść.[34] [He rode it into the ground, abused, pushed	Zajeździł, zamęczył, a jak zaczęła bielmem zachodzić i popuszczać wodę Spod ogona – to wygnał jak psa. [He rode it into the ground, and when she started to get cataract and leak water from under her tail – he banished it like a dog.]

[33] All subtitles quoted in the examples are presented just as they appear onscreen in terms of positioning (left aligned, right aligned, centred), colours and line breaks.

[34] The grey text in the original dialogue means that this information has been deleted in the subtitles.

to work hard, and when she started to get cataract and leak water from under her tail – he banished it like a dog. Before that he hit it with a rod, because the animal didn't understand where it was supposed to go.]	
Dialogue	**Subtitle** 20 (07:19)
Po pierwsze, że drań z tego Sochy tak zwierzę wygnać na zimno. W gruncie rzeczy na zmarnowanie. [Firstly, that bastard is this Socha to send the animal into such cold. As a matter of fact to waste.]	Po pierwsze, że drań z tego Sochy tak zwierzę wygnać na zimno. W gruncie rzeczy na zmarnowanie. [Firstly, that bastard is this Socha to send the animal into cold. As a matter of fact to waste.]
Dialogue	**Subtitle** 26 (05:09)
Jak ja już muszę tak wisieć, to mów ty Jańcio, do mnie tak, żebym mogła zrozumieć! [If I have to hang like this, talk to me, Jańcio, in a way that I can understand.]	Jak ja już muszę tak wisieć, to mów do mnie tak, żebym mogła zrozumieć! [If I have to hang like this, talk to me in a way that I can understand.]

Example 1: Duration of subtitles

This shows that, on occasions, subtitlers made a conscious effort to allow viewers more time to read the subtitles, though they were not very consistent in their approach.

The analysis of the subtitles used in the selected films reveals that one of the most popular editing strategies in the pre-2011 period was the deletion of repetitions, even if there was enough time to include them in the subtitles. Parts of and whole sentences were also often deleted in the SDH, as illustrated in the various subtitles contained in Example 2, below:

Film: ***Jańcio Wodnik [Johnny Waterman]***	
Dialogue	**Subtitle** 52 (13:22)
Zdejmowałaś buty dzisiaj? A ty czego? Nie obrudziłas nóg, Weronka? Nie zdejmowałaś butów, Weronka? Nie zdejmowałam. A po co miałam zdejmować? [Have you taken shoes off today? And you what? Didn't you make your feet dirty, Weronka? Didn't you take your shoes off, Weronka? I haven't. Why would I take them off?]	Zdejmowałaś buty dzisiaj? A ty czego? Nie zdejmowałam. Po co miałam zdejmować? [Have you taken shoes off today?] [And you what? I haven't. Why would I take them off?]
Dialogue	**Subtitle** 83 (12:20)
Pójdę w pole, żal wypłaczę, z losem się pogodzę, z losem się pogodzę… [I'll go into the field, I'll cry out my sorrow, with destiny I will come to terms, with destiny I will come to terms…]	...Pójdę w pole, żal wypłaczę, z losem się pogodzę… […I'll go into the field, I'll cry out my sorrow, with destiny I will come to terms…]
Film: ***Wierna rzeka [The Faithful River]***	
Dialogue	**Subtitle** 2 (2:12)
Muisz umrzeć, rozumiesz? [You have to die, do you understand?]	Musisz umrzeć. [You have to die.]
Film: ***Szaleństwa panny Ewy [Follies of Miss Eva]***	
Dialogue	**Subtitle** 31 (6:14)
No, w takim razie to ja zapytam. Nie, nie teraz. Później, może wieczorem. Tylko, ciociu złota, niech ciocia tak delikatnie. [Well, in that case I will ask. No, not now. Later, maybe in the evening.	Ja zapytam. Nie teraz. Wieczorem. Tylko delikatnie. [I will ask.] [Not now. In the evening. But gently.]

But, dear auntie, do it gently.]	
Film: *Chłopaki nie płaczą [Boys Don't Cry]*	
Dialogue	**Subtitle** 21 (3:12)
Ale to stara i mądra religia, nie dla takich matołów jak ty. [But this is an old and wise religion, not for numbnuts like you.	Ale to stara i mądra religia. [But this is an old and wise religion.]

Example 2: Deletion of part or whole sentences

Another rather common editing practice in the pre-2011 period was the transformation of complex or multiple sentences into simple ones using reformulation, as illustrated in Example 3:

Film: *Szaleństwa Panny Ewy [Follies of Miss Eva]*	
Dialogue	**Subtitle** 107 (4:04)
Wcale nie pragnę, aby z twojego powodu wybuchały tu awantury, rozumiesz? [I don't want at all that arguments erupt because of you, do you understand?]	Nie chcę awantur z twojego powodu. [I don't want arguments because of you.]

Example 3: Simplifying sentences by reformulation

Simplifying syntactical structures involved, among other strategies, converting rhetorical questions into statements, as shown in the subtitles displayed in Example 4:

Film: *Szalenstwa Panny Ewy [Follies of Miss Eva]*	
Dialogue	**Subtitle** 72 (6:12)
Czego bym nie zrobiła dla takiego dobrego	Wszystko zrobię dla takiego

dziecka! I dla pana doktora! [What wouldn't I do for such a good child! And for the doctor!]	dobrego dziecka i dla pana doktora. [I'll do everything for such a good child and for the doctor.]
Film: *Chłopaki nie płaczą [Boys Don't Cry]*	
Dialogue	**Subtitle** 25 (4:07)
Dlaczego wyjadasz mi frytki? Nie możesz sobie kupić? Nie jestem głodny. [Why are you eating my chips! Can't you buy them for yourself? I'm not hungry.]	Wyjadasz mi frytki. Kup sobie. Nie jestem głodny. [You're eating my chips. Buy for yourself.] [I'm not hungry.]

Example 4: Converting rhetorical questions to statements

Another option available to the subtitlers was the alteration of the order of sentence components to a more standard arrangement of Subject – Verb – Object, as seen in Example 5:

Film: *Szalenstwa Panny Ewy [Follies of Miss Eva]*	
Dialogue	**Subtitle** 25 (4:07)
Co? Nie wiem. Coś tatusiowi dolega. [What? I don't know. Something ails daddy (the last two words are swapped round in Polish).]	Co? Nie wiem. Tatuś jest smutny. [What? I don't know. Daddy is sad.]

Example 5: Changing the order in a sentence

We might argue that these strategies were justified by the commonly held view that deaf and hard-of-hearing audiences needed more time to read the subtitles than other viewers. In addition, because most deaf viewers were not

professional users of phonic language, it was thought that simplified structures would be of more benefit to them (Künstler 2007). When looking for the best strategies, subtitlers often contacted academics working in the field of deaf studies to verify their approach. This way of proceeding definitely required more effort and was more time consuming than when working on SDH in the 2011+ period with its more verbatim approach. According to Szarkowska and Laskowska (2014), this shift in attitude has been triggered by the target audience's wishes and expectations, though it can also be argued that such an approach also has its financial advantages, as verbatim subtitles can be produced much faster than edited ones.

When the original dialogue needs to be edited down due to temporal and spatial constraints, deletion is the number one strategy used by practitioners. The editing process can involve the elimination of certain lexical parts or even complete sentences, as illustrated in the various subtitles given in Example 6, below:

Film: ***Sto minut wakacji [One Hundred Minutes of Holidays]***	
Dialogue	**Subtitle** 34 (3:02)
To ja jestem Milley, moja mam zaraz przyjedzie. Możecie poczekać? [I am Milley, my mum will be arrive in a moment. Can you wait?]	To ja jestem Milley, możecie poczekać? [I am Milley, can you wait?]
Film: ***Pokot [Spoor]***	
Dialogue	**Subtitle** 110 (2:02)
Rodzice są oburzeni! To jest po prostu niedopuszczalne. [The parents are outraged! This is simply unacceptable.]	Rodzice są oburzeni! [The parents are outraged!]

Film: ***Sztuka kochania [The Art of Loving]***	
Dialogue	**Subtitle** 30 (2:04)
Często tak lejecie chłopów, że aż w szpitalu lądują? [Do you often beat the men like that so that they end up in a hospital?]	Często tak lejecie chłopów? [Do you often beat the men like that?]

Example 6: Deletion of part or whole sentences

Lexis

In the pre-2011 period, a substantial number of words and phrases uttered in the dialogue were replaced in the subtitles by more common expressions with which deaf and hard-of-hearing viewers were more likely to be familiar. Linguistic items and figures of speech that were thought to cause comprehension problems in the target audience included archaic language (see Example 7) and metaphors (Example 8), as well as words and expressions of a colloquial nature. Simplifying or neutralising these expressions took place in these cases:

Film: ***Wierna rzeka [The Faithful River]***	
Dialogue	**Subtitle** 4 (3:13)
Gdzie? Czego się gapisz? Jucha z niego ciece. [Where? Why are you staring? Blood (old-fashioned word) is leaking from him.]	Pomagaj mi. Ale krew z niego leci.[35] [Help me. But he's bleeding.]

[35] An empty line between the lines of a subtitle means that there are two characters speaking in a subtitle.

Dialogue	**Subtitle** 7 (4:04)
I on pewnikiem żyje. I jak takiego do dołu? [And he is surely alive. And how to get him to the ditch?]	Ale on chyba żyje. Jak można takiego pochować? [But he might be alive. How can one bury him?]

Example 7: Neutralising archaic language

Film: ***Szaleństwa panny Ewy [Follies of Miss Eva]***	
Dialogue	**Subtitle** 24 (3:14)
Ciociu, coś gryzie Hieronima. [Auntie, something is 'biting' Hieronim.]	Auntie, Hieronim ma jakieś kłopoty. [Auntie, Hieronim has some problems.]
Dialogue	**Subtitle** 75 (4:23)
Tatusiu, uważaj, żebyś tam nie zjadł psa. Jezus Maria, co ty pleciesz? [Daddy, be careful not to eat a dog there. Jesus, Mary, what are you blabbing?]	Uważaj, żebyś tam nie zjadł psa. Co ty mówisz? [Be carfeul not to eat a dog there. What are you saying?]
Dialogue	**Subtitle** 204 (4:15)
Jak pan śmie bić to niewinne zwierzę! Pan jest bez serca. [How dare you, Mr, beat this innocent animal! You are without heart.]	Jak pan może bić to niewinne zwierzę? Pan jest okrutny. [How can you, Mr, beat this innocent animal? You are cruel.]

Example 8: Neutralising metaphorical language

Other examples showing instances where language has been simplified in the film, *Chłopaki nie płaczą* [*Boys don't cry*], where the phrase *przyjąć postać* [take the body of] becomes *być* [to be] in the subtitle, *pójść na egzamin* [go for an

exam] is converted into *mieć egzamin* [have an exam], and *nie zdawać sobie sprawy* [do not realise something] ends up being *nie wiedzieć* [do not know something].

The results of analysing the SDH files produced during the 2011+ period show that there are very few instances in which words or phrases have been replaced with synonyms and, if they are, they tend to be due to technical constraints. On these occasions, editing usually takes the form of the deletion of repetitions and whole clauses, as illustrated in Example 9:

Film: *Kamasutra [Kama Sutra]*	
Dialogue	**Subtitle** 755 (5:03)
(…) w którym bez ogródek i bez ściemniania rozmawiamy o życiu seksualnym naszych rodaków, naszych Polaków. [In which without any barriers and misleading, we are talking about sexual life of our fellow countrymen, our Poles.]	w którym bez ogródek rozmawiamy o życiu seksualnym naszego kraju. [in which without any barriers we are talking about sexual life of our country.]
Film: *Sztuka kochania [The Art of Loving]*	
Dialogue	**Subtitle** 797 (4:24)
Pani doktor, ja bardzo przepraszam, że przeszkadzam, ale pani musi kogoś poznać. To jest szef wydawnictwa. [Doctor, I apologise a lot that I am disturbing you, but you have to meet somebody. This is the director of the publishing house.]	Pani doktor, pani musi kogoś poznać. To jest szef wydawnictwa. [Ms Doctor, you have to meet somebody. This is the director of the publishing house.]

Example 9: Editing strategies in the 2011+ films

Style

The editing of stylistic devices is also more common in the pre-2011 period than in the 2011+ period. The style of the original dialogue was altered in some of

the subtitles as a consequence of the simplification of the syntax and the lexis. The end result is a linguistic style that is more neutral than the original dialogue and shows fewer rhetorical influences from other periods or registers. Some instances of these neutralising changes can be seen in the subtitles listed in Example 10, below:

Film: ***Wierna rzeka [The Faithful River]***	
Dialogue	**Subtitle** 14 (4:02)
Bitwa? Toś ty powstaniec! [Battle. You an insurgent.]	Bitwa? To ty jesteś powstaniec? [Battle? You are an insurgent?]
Dialogue	**Subtitle** 25 (3:14)
Kajżeś buty zgubił? [Where have you lost your shoes? (old style structure)]	Gdzie buty zgubiłeś? [Where have you lost your shoes?]
Dialogue	**Subtitle** 34 (4:09)
Won, ino patrzeć, jak przyjdą po śladach. [Go! Only to look when they come here following the steps.]	Idź stąd! Kozacy mogą tu przyjść po śladach. [Go away! Cossaks can come here following the steps.]
Film: ***Chłopaki nie płaczą [Boys Don't Cry]***	
Dialogue	**Subtitle** 23 (3:19)
Jedni po śmierci przyjmują postać tygrysa,	Jedni mogą być tygrysem, sokołem…

sokoła albo lamparta. A inni? [Some after death take on a body of tiger, falcon or leopard. And others?]	A inni? [Some can be a tiger, falcon… And others?]

Example 10: Neutralising style

While modifications that affected the style of the original were common in the pre-2011 subtitles, the SDH created in the 2011+ period does not show many signs of neutralising stylistic devices. In this sense, all the subtitle files analysed for the purpose of this study are very close in style and register to the characters' utterances on the soundtrack.

Even though editing strategies have changed between the pre-2011 and 2011+, periods with verbatim subtitling being implemented far more commonly in today's SDH, there are still situations when 'heavy' editing is still applied. An example is subtitling for special purposes and audiences, as in the case of subtitles created for deaf pupils who are in the process of acquiring their reading skills in Polish (see Chapter 3).

Discussion

The analysis conducted for the purposes of this study demonstrates that the approach to editing in Polish SDH changed substantially between the two periods identified. Hypothesis 6, stating that more deletion was conducted in the subtitles from the pre-2011 period, and Hypothesis 7, which predicted that editing would affect the syntax, lexis and style of the dialogue to a higher degree in the pre-2011 period, both turn out to be true. Indeed, the original dialogue exchanges were more simplified and toned down in the pre-2011 period than in 2011+ period, with verbatim subtitling currently the norm.

The subtitling practice characteristic of the beginnings of the service provision seems to follow the trend set in the USA – one of the pioneers and leaders in closed captioning –, which gave priority to 'heavy' editing (Jensema *at al.* 1996).

According to the feedback provided during the interviews by the professionals working in the first years of SDH in Poland, the professionals relied, first and foremost, on the guidance provided by academics and teachers of the deaf (Künstler 2007), who suggested that, due to the generally low reading levels of people with hearing impairments, SDH should be as simplified as much as possible. They also insisted that ample time should be given for the deaf and the hard-of-hearing to comfortably follow the subtitles whilst watching the images. The analysis of the files obtained from TVP – the only provider of SDH from its inception in 1994 till 2011 when a change in the law required other television stations to introduce accessible services on their channels – confirms the subtitlers' feedback.

SDH from the pre-2011 period includes many instances of simplified syntax achieved by changing the structure of some of the complex sentences in the original. Other common approaches were the editing out of unnecessary information and the use of more common phrases. In addition, even though some subtitles are pruned of information and much shorter than the dialogue exchanges onscreen, they still stayed on the screen for a long time, often longer than 10 seconds.

A frequent approach in the early years of SDH in Poland was the use of three or more lines. This might have helped to prevent the fragmenting of long sentences into several subtitles and thus allowed the target audience to read a whole utterance at a time. Yet, these subtitles also covered a significant part of the screen and partly obscured the images as well as reducing the time available to watch the action, especially as very often no more time was given to read three- or four-liners than standard one- or two-liners. When analysing files created closer to the year 2011, it is evident that the trend is being reversed, as most subtitles consist of a maximum of two lines and less 'heavy' editing is applied. Such a change may have been the result of feedback provided by the audience. TVP subtitlers at the time were very keen to maintain and strengthen their contact with their audiences and actively listened to viewers' comments when they began to demand access to closer-to-verbatim SDH. This trend was sustained into the 2011+ period, when editing was limited

to the deletion of redundant repetitions or unnecessary information. In general, our analysis shows that a clear effort is being put towards making the subtitles as verbatim as spatial and temporal constraints allow. The same approach can be found in the case of foreign productions. As discussed, for foreign films SDH is usually based on the film's voice-over track which has already been edited. In these instances, though, it is important to check whether information relevant to deaf and hard-of-hearing viewers has not been left out, for example the names of characters, etc.

Subtitling practices have also become more standardised in terms of presentation, and these days two lines, usually centred, are the maximum allowed per subtitle. More attention is paid to breaking the lines and subtitles according to grammatical and semantic rules. Lip reading seems also to be taken into account and, generally speaking, the words used at the beginning and end of sentences, as well as phrases pronounced in close ups, tend to be rendered word-for-word in the subtitles.

All these changes in the subtitlers' approach to editing observed over the two periods, pre-2011 and 2011+, closely reflect the trend that has been detected in SDH worldwide, that is to say, the creation of subtitles that are as verbatim as possible, so that deaf and hard-of-hearing audiences receive the same amount of information as hearing viewers. Indeed, an increasing number of people with hearing loss object to being provided with simplified or even, in their opinion, censored information. An example of this is the recent issue of Netflix's simplification of SDH to *Queer Eye (*The Telegraph 2018*).* It needs to be noted, though, that verbatim subtitling is often carried out at the cost of comfortable presentation and reading speeds. However, in the current age of media digitalisation, when most people have unlimited access to textual and multimedia information, individuals with hearing impairments tend to be more practised at reading text against images and at quickly scanning it for the desired information. As they are fairly accustomed to watching subtitled programmes, it can be assumed that they are also able to cope with faster display rates.

When subtitling for special purposes and audiences, as in the case of deaf students who are learning to read in Polish, 'heavy' editing seems to be acceptable, and even recommended. This way of editing helps the students to develop their skills in reading subtitles as well as assisting them in reading more verbatim subtitling in the future. Katarynka, one of the Polish NGOs working in this field, has set up an online project called Adapter (https://adapter.pl/filmy), which includes an archive of films streamed with two types of subtitle: standard SDH and simplified SDH for those that might benefit from this type of service. The initiative is very popular with deaf and hard-of-hearing pupils, who often struggle with verbatim subtitles.

6.2.3 Extralinguistic and paralinguistic elements

The representation of extra- and paralinguistic elements requires professionals to add the sound effects and the paralinguistic features that are considered to be important for understanding the diegesis of the audiovisual programme, as well as to mark the speakers' turns of phrase in a way that the viewers find easy to identify.

When discussing the extra- and paralinguistic elements common in SDH, Toury's (1995) initial norm is particularly significant. In this respect, all the extra labels used in the subtitles to identify characters, describe speech and indicate sounds contribute to making the target text more 'acceptable' (target oriented) to the intended viewers. However, if the labels are seen as textual renditions of extra- and paralinguistic information that can be understood directly from the original programme, they are considered 'adequate' (source text oriented) at the same time. They do not add extra information, but only represent the original message in a different (visual) format.

Chesterman's (1997) accountability norms are also relevant to the analysis of extra- and paralinguistic features. Indeed, professional accountability highlights the subtitler's responsibility towards deaf and the hard-of-hearing audiences by requiring that their target texts convey any important non-speech sound elements that are necessary for the viewers to fully enjoy the audiovisual

production. In addition, Chesterman's (*ibid*.) communication norm is also a beneficial heuristic tool for this type of research, as it highlights the fact that the target audience should receive as much information about the film as hearing viewers do.

6.2.3.1 Extralinguistic and paralinguistic elements: interviews

All the professional subtitlers interviewed for this study indicated that they regularly include extralinguistic elements in their SDH. Those who also worked in the initial period of SDH provision in Poland claimed that they used to describe more sounds and paralinguistic features in the early years, as one of their main objectives was to render as much sound information as possible in their subtitles. With the passage of time and the accumulation of experience, they gradually realised that sounds whose source is clearly visible on screen do not need to be described in the subtitles, an approach that nowadays seems to be common practice. The subtitlers all agreed that they only include descriptions of sounds that are relevant to the plot and cannot be inferred from the visuals. If there is time, some may add descriptions of sound effects that help build the atmosphere, such as 'dogs barking in the distance' and the like. As regards the grammatical and syntactical structure of the phrases and sentences used to indicate this information, there seems to be a wide variation, depending on the specific situation and the context, for example if there is some general singing, then the label 'SINGING', in capital letters, is appropriate. If a character is seen singing, then the verb indicating the action is used, for example 'SINGS', whereas if they are not visible onscreen but they can be heard singing, standard practice requires the addition of 'NAME OF THE CHARACTER + SINGS'.

The presentation of these labels onscreen can differ, with some subtitlers making use of capitals in square or round brackets, for example '[SINGING]' or '(SINGING)', whilst others prefer to resort to regular font in square brackets, e.g. [singing], and yet others use a separate colour, usually blue, to indicate sound labels, e.g. 'SINGING'. The situation is complicated by the fact that there are different standards and approaches even within the same television station.

Generally speaking, subtitlers prefer to use descriptive labels rather than onomatopoeias, as deaf viewers might not be familiar with the onomatopoeic representation of certain sounds.

Most professionals rely on the use of three main colours – yellow, green, and cyan – to facilitate character identification rather than labels with the names of the characters on them. Some also add magenta and dark blue to their chromatic palette and, when necessary, they make use of red, though they were quick to stress that red is rarely employed as it reduces the visibility of the text on screen. In the absence of appropriate guidelines, quite a few subtitlers have developed their own idiosyncratic strategies in the way in which they use certain colours. For instance, green is allocated to women whilst cyan is for men; or the first character to appear on screen is yellow, while the second is green. The professionals acknowledged that these approaches respond to their own preferences rather than any empirical testing or recommendations from any set of guidelines. One of the respondents stated that even though they might sometimes assign a given colour to a negative character in a film, the strategy could not always be implemented on a regular basis as viewers might figure that out.

In general, the responses from the interviews show that the basic principles of what to describe are similar, but that there are various standards when it comes to the typographical features that characterise the presentation of descriptive labels onscreen. This all highlights the fact that there is a need for greater consistency in this area, and that this information should be offered in professional guidelines and stylesheets so that subtitlers can use it in a systematic manner.

6.2.3.2 Extralinguistic and paralinguistic elements: subtitle files

After the analysis of the information provided by the professionals concerning the description and representation of extra- and paralinguistic elements in SDH, the current section concentrates on the results of the analysis of the selected 18

SDH files, followed by the discussion of examples that support or contradict the hypotheses stated above (see Section 6.1.2.4).

As Figure 58 below shows, the number of appearances of sound effects, music and singing, paralinguistic elements (all human produced non-verbal sounds, as described in Section 5.3.3) is higher in the files from the 2011+ period. "Other" features included in the chart comprise of instances such as descriptions of action on screen, but also voices from television, radio, etc., and they are the only element slightly lower in numbers in the files from the 2011+ period.

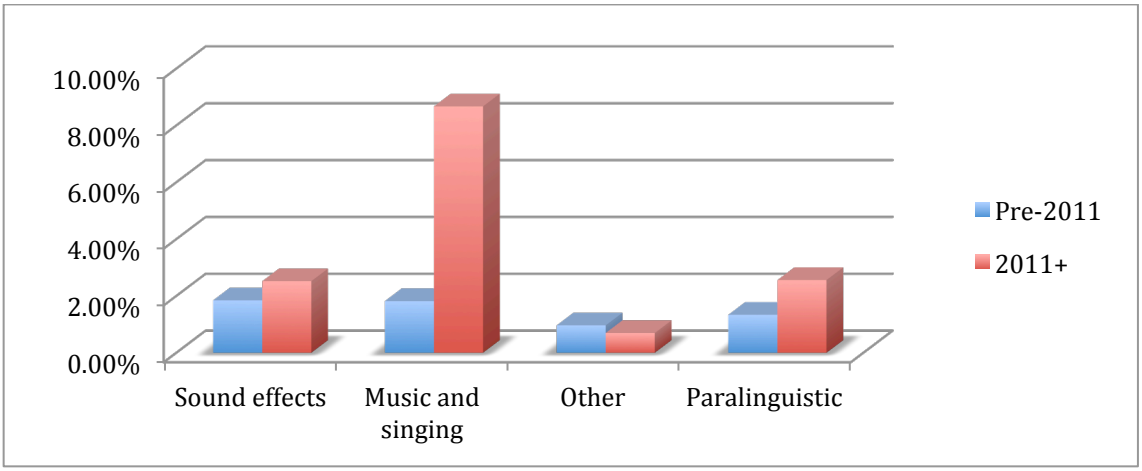


Figure 58: The occurrence of extra- and paralinguistic features in films from the pre-2011 and 2011+ periods

The results indicate that in general, subtitlers use extra- and paralinguistic elements more readily nowadays. A closer analysis shows (see Appendix 5) that, even though one film was a musical, which naturally impacted on the final number of the indication of music and singing, in other films from the 2011+ period music was indeed subtitled more often than in the files from the pre-2011 period.

The examples below shed more light on the type of labels describing extra- and paralinguistic elements in both periods.

Sound effects and music

Sound effects and music have always been marked in Polish SDH, both in the pre-2011 and 2011+ periods. The analysis of the broadcast subtitles showed that, initially, the sound descriptions were of a rather general nature, as shown in the subtitles listed in Example 11, below:

Film: ***Jańcio Wodnik [Johnny Waterman]***	**Subtitle** 9 (12:02)
	RŻENIE KONIA [neighing of the horse]
	Subtitle 147 (18:08)
	ŚPIEW [singing][36]
	Subtitle 186 (7:20)
	MUZYKA [music]
Film: ***Wierna rzeka [Faithful river]***	**Subtitle** 85 (1:20)
	ŚPIEWA [sings]
	Subtitle 412 (3:07)
	STRZAŁY [shootings]

Example 11: General sound and music descriptions in the pre-2011 subtitles

[36] All back translations are given in lowercase in square brackets.

Often, there is no extra information given on the atmosphere created by the sound or music, notably whether it is happy, sad, romantic or mysterious. In the film *Wierna rzeka [Faithful River]*, no information on instrumental music is offered in the SDH at the beginning of the film, even though the scene is rather long and the music plays a meaningful role in setting the mood for what is to come. Despite the potential subjective bias of such indications, the addition of any such information could contribute to the enhancement of the target audience's viewing experience by letting them know what is being heard and by helping to create a certain atmosphere.

In the early years of SDH development, we can see that some of the labels included in the subtitles described the visible action onscreen rather than the actual sounds, as in Example 12, below:

Film: *Wildflower*	**Subtitle** 61 (5:15) followed by text
	PRÓBUJE COŚ POWIEDZIEĆ [trying to say something]
	Subtitle 282 (6:11) followed by text
	SAMMY ZAPISUJE [Sammy is writing down]
Film: *Tobruk*	**Subtitle** 425 (3:11)
	NALOT [air raid]
Film: *Chłopaki nie płaczą [Boys don't cry]*	**Subtitle** 158 (2:02)
	ZAPALA SILNIK [starts the engine]
	Subtitle 265 (4:04)
	WYJE RAZEM Z PSEM

	[wails with the dog]

Example 12: Labels describing action in the pre-2011 subtitles

One option concerning singing was to provide viewers with details about the person singing and the type of song, without any transcription of the actual lyrics, even though sometimes there was ample time to incorporate such information. In Example 13 below, subtitle 188 leaves the screen at 10:27:22:06 and is immediately followed by the lyrics of the carol. As the next subtitle, 189, does not appear on screen after nearly two minutes (10:29:12:16), the subtitler could have opted, in principle, for the literal transcription of the lyrics. Yet, the final decision was to ignore the content of the carol, which meant that deaf and hard-of-hearing viewers could see Eva's father singing on screen but could not access the message of the song:

Film: ***Szaleństwa Panny Ewy [Follies of Miss Eva]***	**Subtitle** 188 (4:14) Time in 10:27:17:17 Time out 10:27:22:06
	OJCIEC EWY ŚPIEWA KOLĘDĘ [Ewa's father is singing a carol]
	Subtitle 189 (4:08) Time in 10:29:12:16 Time out 10:29:16:24
	Wracasz do domu? Idę na bazar. [Are you going back home? I'm going to the market.]

Example 13: Labels to indicate songs

More instances of detailed sound effects and music descriptions can be observed in the 2011+ period. They include, for instance, information on the nature of the music, as shown in the two excerpts illustrated in Example 14, below:

Film: ***Zdjęcie z papieżem [Picture with the Pope]***	**Subtitle** 2 (3:22) MUZYKA GÓRALSKA – SKRZYPCE [mountain music – violin]
Film: ***Kamasutra***	**Subtitle** 15 (2:12) [muzyka hinduska] [hindu music]

Example 14: Labels describing the nature of sound

More subjective labels, usually created by means of adding epithets, can also be found in the subtitles, as in Example 15:

Film: ***Zupełnie Nowy Testament [The Brand New Testament]***	**Subtitle** 382 (3:22) ♪poważna barokowa aria operowa [♪serious baroque operatic aria]
Film: ***Śmierć na 1000 sposobów [1000 Ways to Die]***	**Subtitle** 44 (3:08) (NIEPOKOJĄCA MUZYKA) [unsettling music]
Film: ***Dog Whisperer***	**Subtitle** 18 (1:20) [radosna muzyka] [joyful music]
Film: ***Lalaland***	**Subtitle** 7 (3:10) ♪energiczna muzyka [♪energetic music]

Example 15: Subjective labels indicating sound

Compared with the first period, the use of labels to indicate different types of sound effect and music has by now become more consistent, thus giving viewers a better understanding of the film. In this sense, the 2011+ period is characterised by the presentation onscreen of fuller descriptions of sound, for instance informative labels that are used at appropriate moments and focus on describing actual sounds. However, in terms of the presentation, there are still a number of approaches depending on the broadcaster or the medium itself, for instance the use of lowercase or uppercase letters or square or round brackets.

More detailed information is also provided about the type of singing on the soundtrack and is usually followed by a verbatim transcription of the lyrics, as seen in the subtitles in Example 16:

Film: ***Sztuka kochania [The Art of Loving]***	**Subtitle** 252 (4:24)
	♪[pogodna piosenka]: Czerwone Gitary, “Kwiaty we włosach” [♪[cheerful song]: Red Guitars, “Flowers in the hair”]
	Subtitle 355 (5:16)
	♪ [śpiewa Adam Aston]: *W życiu bliska będziesz mi zawsze ty* ♪ [♪ [sings Adam Aston]: In life you will always be close to me ♪]
Film: ***Zupełnie Nowy Testament [The Brand New Testament]***	**Subtitle** 936 (4:00)
	♪żywa fortepianowa muzyka, J. P. Rameau, “Nawoływanie ptaków” [♪lively piano music, J. P. Rameau, “The call of the birds”]

Example 16: Labels describing singing

A musical note is often used to identify song in the 2011+ period. This is mainly due to technological progress, as in the pre-2011 period, analogue television did not allow for the use of symbols such as a musical note. In the UK the symbol ♯ indicated singing. However, this was not popular in Poland, where only labels were used to show viewers that singing was going to take place. Such findings confirm that the norms that regulate the presentation of singing onscreen have also evolved over the two periods.

Paralinguistic elements

The analysis of the pre-2011 files showed that paralinguistic elements were used sporadically in the subtitles at the time, and information of this nature was usually limited to indicating instances of crying, screams or laughter, as demonstrated below in Example 17:

Film: ***Jańcio Wodnik [Johnny Waterman]***	**Subtitle** 196 (7:18)
	PŁACZ DZIECKA [baby's crying]
Film: ***Wierna rzeka [Faithful river]***	**Subtitle** 45 (3:14)
	KRZYKI [screams]
Film: ***Chłopaki nie płaczą [Boys don't cry]***	**Subtitle** 231 (3:03)
	ŚMIECH SAMANTY [Samanta's laughter]

Example 17: Paralinguistic elements in the pre-2011 period

Other identified paralinguistic elements include adding emphasis to the text, as in the following Example 18 from *Wild Flower*, where the reader is alerted to a typo contained in a word that appears in capital letters on screen:

Film: *Wild flower*	**Subtitle** 492 (8:09)
	Czy w tym liści były jakieś przecinki lub znaki ZAPETANIA[37] Sammy? [Were there any commas or QUESTION MARKS (misspelt) in the letter, Sammy?]

Example 18: Rendition of emphasis

The paralinguistic information that can be found in the 2011+ corpus often includes the way in which the characters speak, as illustrated in Example 19:

Film: *Sztuka Kochania [The Art of Loving]*	Subtitle 1089 (2:22)
	[drwiąco]: Rzetelny naukowiec. [[scornfully]: Honest scholar.]
Film: ***Dog Whisperer***	Subtitle 179 (2:15)
	[naśladuje św. Mikołaja] Hohoho! [[imitates Father Christmas] Hohoho!]

Example 19: Paralinguistic elements (related to speech) in the 2011+ period

Also, similarly to the situation with music, more detailed information is added to the description of paralingustic elements in the 2011+ period, as shown in Example 20.

Film: *Pokot [Spoor]*	Subtitle 6 (2:18)
	[ciche chrapanie]

[37] Misspelt on the screen. The correct spelling is 'ZAPYTANIA'.

	[quiet snoring]
Film: *Zupełnie Nowy Testament [The Brand New Testament]*	Subtitle 130 (2:07)
	[wściekły krzyk][38] [furious scream]

Example 20: Paralinguistic elements in the 2011+ period

Nonetheless, such labels are not very common, and we might argue that this is so because subtitles these days are close-to-verbatim, requiring the viewers to be fluent and fast readers, and this type of information adds to the cognitive load of the reading and is not considered to be very important for the understanding of the original dialogue. It may be also the case that subtitlers consider these details to be too subjective and/or that this type of information can easily be retrieved directly from the screen.

Presentation of subtitles

In the early years of SDH provision in Poland, the presentation of the subtitles onscreen was limited by the technical restrictions characteristic of Teletext, which was based on analogue technology and the only platform available for broadcasting SDH on television. Additionally, the only provider of subtitling for people with hearing impairments was the Polish public service television, TVP, which meant that the SDH layout was dictated by their practice.

The unique features that characterised the subtitles broadcast via Teletext included a limited numbers of colours that could be used and were restricted to six (white, cyan, yellow, green and magenta for character identification, and dark blue for sound descriptions), as well as the impossibility of activating italics. Other characteristics typical of the subtitling produced during the pre-2011 period were the following:

[38] In green, as it refers to the person identified through the use of green throughout the film.

- Identifying characters: the subtitles were positioned close to the person speaking (speaker-dependent placement), though this approach was fading out towards the end of the period when most subtitles were beginning to be centred. In addition to the use of positioning, subtitlers resorted to employing colours and including labels on which the text was written in capital letters.
- Indicating sounds: the preference was to employ capitals in navy blue, though some inconsistency crept into the practice when, on occasions, sounds were signalled by letters in white against a blue background.

In the 2011+ period, the following significant developments and shifts have taken place. Thanks to technological advances, the use of italics has been made possible and the transcription of the lyrics in songs and any off-screen speech is now common practice. Subtitles continue to be placed at the bottom of the screen but are now centred rather than positioned beneath the speakers. The various speakers onscreen are identified by colours. The practice, however, is very heterogeneous with noticeably big differences among the various platforms and, quite often, even within the same provider. Thus, while TVP mainly uses only three colours – yellow, cyan and green –, other stations also use red, magenta and, sometimes, other colours, purple for instance. Characters in films for DVD distribution are sometimes identified by means of labels, while, on other occasions, colours are also used.

The representation of sounds is rather eclectic in this period. They are sometimes presented on screen in capital letters only (TVP), in capital letters contained within square brackets (Polsat), in capital letters within round brackets (TVN), or in small letters within square brackets (TVN and commercial DVDs).

Subtitles indicating the presence of music and singing are preceded and followed by a musical note ♪, mostly on DVDs. The musical note is displayed next to the descriptive label, which sometimes appears in square brackets, as in subtitle 252 (Example 16).

Nowadays, more attention is paid to the syntactical formulation and layout of the subtitles. For the most part, the breaking of lines within and across subtitles is carried out with respect shown to grammatical and semantic units.

The above characteristics and developments highlight the fact that inconsistencies are still rather common, especially as regards the representation of sounds onscreen. Such dissimilarities are not only apparent across the different platforms, but can also be observed within one and the same platform or television station.

Discussion

The examination of the selected subtitle files alongside the video materials that accompany them demonstrates that Hypothesis 6 cannot be confirmed by the analysed data. Indeed, as regards the representation of extra- and paralinguistic elements onscreen, more standardisation was present in the initial years of SDH provision than in the 2011+ period. This is of course due to the lack of competition at the time, and the fact that the public service TVP was the only stakeholder broadcasting programmes with SDH, which made it easier for them to control the standards that were being applied. The emergence of new media players and broadcasters in the second period, together with the lack of fixed guidelines to regulate SDH, have added a degree of heterogeneity that is prevalent nowadays, too.

Moreover, in the beginning, there were only a few subtitlers working on SHD in what could be described as a cottage industry. They were directly employed by the same TV company, making it easier for them to agree on a certain format that they could follow in their work. On the other hand, in the 2011+ period, when the outsourcing of SDH started to take place and subtitlers were no longer working directly for the TV station, but rather with language service providers, more television stations and other media platforms started delivering SDH services, which introduced more variation as regards presentation and layout. Different television stations and platforms adopt different approaches for SDH, from capital letters in round brackets to lowercase letters in square brackets,

thus highlighting the heterogeneity and lack of consistency in the textual presentation of subtitles. This may be seen these days as a missed opportunity at the time, when collaboration could have been strengthened among the various stakeholders so that provision of SDH could have been better formalised and homogenised.

Having said that, different approaches provide a platform for conducting reception studies, where viewers' opinions and preferences can be elicited. Some empirical research has already been conducted in this respect, like the study carried out by Szarkowska and Laskowska (2014), in which, after having been confronted with various alternatives in the representation of sounds, most of the respondents stated that they preferred to read descriptions of sounds in capital letters and within square brackets. However, and crucially, they also acknowledged that the form and layout of the subtitles were not a problem as long as they were consistent throughout the duration of a programme.

It is difficult to ascertain whether the description of sound effects was more standardised in the pre-2011 period (Hypothesis 7). What the analysis revealed was that sound descriptions were more general in the early years of SDH provision than in the 2011+ period when subtitlers had started to provide more detailed information on sounds, covering not only the nature of the sound but also its main qualities: 'WŚCIEKŁY KRZYK [FURIOUS SCREAM]' or 'CICHE CHRAPANIE [QUIET SNORING]'. This shows that subtitlers have become more daring and subjective in their interpretation of sound. During the interviews, subtitlers affirmed that more sound descriptions were included in the early years of SDH provision, claiming that the reason behind this was the fact that it was not clear to them which sounds to subtitle and which ones to leave out. They admitted with hindsight that, very often, they would subtitle sound effects that were irrelevant to the development of the plot. The analysis of the files reveals that some examples from the pre-2011 period include renditions of sounds that are clearly visible onscreen, or descriptions of actions rather than sound effects, as in the following example: 'NALOT [AIR RAID]', which is also visible onscreen. This could be attributed to the fact that the subtitlers felt the need to include more descriptions of sound effects in their subtitles. However, it

is also clear that the labels produced in the 2011+ period contain more detailed, accurate renditions of the various sound effects.

Descriptions of paralinguistic elements were hardly ever included in the subtitles produced in the pre-2011 period, whereas the number increased substantially in the 2011+ period when subtitlers seem to have become more aware of their importance.

The situation has changed quite radically concerning the use of colour in subtitles. The move from analogue to digital television has opened up the possibility for subtitlers to choose from a palette of many more colours than previously. Unlike TVP's traditional practice where just a few colours were used, some stations have now taken advantage of these new possibilities and are including more colours into their palette, such as red or purple. Even though the number of colours is virtually limitless, companies still usually stick to the traditional five dictated by Teletext. Such an approach is not always met with viewers' approval, however. Colours such as magenta, red, and navy blue are not clearly visible onscreen, and therefore make watching subtitled content less enjoyable, as noted by viewers in a study conducted by Szarkowska and Laskowska (2014). One potential drawback to the use of too many colours is that the target audience will need to remember what each of the colours represents.

A development worth mentioning here is that, nowadays, some TV stations assign different colours to the various characters within one scene, but the same colours are not necessarily maintained for the duration of the whole film or programme. This strategy has been adopted from the UK, where it has a longer tradition, and even though if may be convenient when multiple characters need to be subtitled, it may turn out to be confusing for the audience, as some of them may change their colour later on in the film.

6.3 Concluding remarks

The study carried out for the purpose of this thesis has aimed to address the developments that have taken place in terms of SDH norms in Poland since the beginnings of this access service in 1994. Three areas specific to SDH, namely (1) subtitle display rates, (2) extent of textual editing, and (3) representation in the subtitles of the dialogue's extra- and paralinguistic features, were identified as key to tracking the changes that have taken place in two distinct historical periods: (1) from the inception of Polish SDH in 1994 to 2010, and (2) from 2011, when providing SDH on Polish television became law, to 2017, when the last files were collected.

To sum up the findings, **subtitle speeds** have increased over the two periods, from 9.22 to 10.70 cps on average, in line with the trend shown in other countries. Nowadays, there seems to be a marked move towards the rendering of faster subtitles and more verbatim SDH, as attested by agencies like the British Ofcom (2010) or the Polish Krajowa Rada Radiofonii i Telewizji [The National Broadcasting Council] (KRRiT 2016), and audiovisual media companies like the British BBC (2018) or the North American Netflix (2018). However, even though more subtitles are currently reaching higher than average speeds, most files were characterised by presentation rates under 12 cps. TVP subtitles were characterised by lower speeds in comparison with private television and DVD-NGO, a finding that may have its roots in the past. Indeed, Polish subtitlers, especially those who have worked in SDH since its inception, were reluctant to increase their presentation rates, believing that the target viewers might struggle to read faster subtitles. In order to make subtitles accessible to the target audience – in Karamitroglou's terms 'recipients' –, they preferred to set the expected reading speed of viewers as low as possible in a given scenario, for a specific programme following specific guidelines, for instance. In general, the most comfortable speed used by all the subtitlers interviewed was 12 cps.

Editing strategies also changed over the two periods, from subtitles undergoing 'heavy' editing in the first years of SDH to much lighter editing nowadays, which

is mostly limited to occasional deletions dictated by the temporal and spatial constraints of the subtitling modality. The Polish SDH experience is in some ways similar to that of other countries (Jensema *at al.* 1996, Künstler 2007). Indeed, in its early years, SDH files were heavily edited in an attempt to facilitate reading for deaf viewers who were believed to struggle with reading dynamic text on the screen. This development was facilitated by the expectations of the target viewers who wanted to receive the same information as their hearing counterparts and opted for verbatim, or close-to-verbatim, subtitles. The findings from our analysis of files confirm the feedback of the subtitlers interviewed, as they are nowadays more inclined to refrain from adapting the text and only mentioned the omission of individual words or phrases when they were forced to do so by the technical restrictions of the subtitling modality.

This evolution is the result of social and technological changes as well as some research initiatives. The increasing number of reception studies underway in Poland (Szarkowska and Laskowska 2014, Krejtz *et al.* 2016, Szarkowska *et al.* 2016) and in other countries like the UK and Spain (Romero-Fresco 2015, Iriarte 2017, Tamayo 2015) are helping to better identify viewers' needs and preferences. Technological developments have also played a role in changes to subtitle display rates and text editing. As people use portable smart devices to access television and video-on-demand platforms on a more regular basis than ever before, and as they are being constantly exposed to the presence of dynamic messages onscreen, we might argue that they are more able to process this type of information more quickly than their predecessors. In addition, the greater social awareness of the added value of accessibility services has been the catalyst for the production of a greater number of the accessible programmes that populate our screens. Thanks to the introduction of legal requirements in numerous countries,[39] the volume of accessible

[39] For those interested in the legislative issues, the MAP (Media Accessibility Platform, www.mapaccess.org/index.php) project is an excellent point of reference. It defines itself as a unified atlas charting the worldwide landscape of research, policies, training and practices in this field. Of particular interest is its accessometer, which provides a world map of the legislation, standards and guidelines on media accessibility organised by country.

productions has grown vastly in recent years, thus giving audiences a greater opportunity to watch subtitled programmes more often and in a greater variety. This kind of exposure, in turn, has helped them develop faster reading skills.

The last characteristic feature in SDH analysed for the purpose of the study concerns **extra- and paralinguistic elements**, which have also changed over the course of time. The shift has been from the use of fewer and more general labels describing music, sound effects and paralinguistic information to more numerous and more detailed representations of these elements in recent times. However, this finding contradicts what subtitlers working in the early stages of SDH development in Poland stated in their interviews. They believed that more sound descriptions were used in the pre-2011 period, as they also tended to describe sound effects that might have been relevant to the understanding of the plot.

Even though the representation of extra- and paralinguistic elements appears to have gained more of a foothold in SDH, their configuration onscreen is not consistent and there are many discrepancies in the content and layout. This is perhaps an area on which regulatory bodies could focus so that a more systematic approach can be developed. The result of such an initiative could greatly enhance deaf and hard-of-hearing viewers' experience when watching subtitled programmes.

In conclusion, the corpus used in this study has allowed for a comparative, diachronic analysis of SDH norms in Poland as far as subtitle display rates, textual editing, and the representation of extra- and paralinguistic elements are concerned. However, there are also some limitations to the study. One of these is the number of subtitle files. As noted earlier in the chapter, the effect size between the values observed in the pre-2011 and the 2011+ periods is not that large. Statistically, if the data increase, the effect size is also more significant. The number of videos analysed for the purpose of examining editing and extra- and paralinguistic elements was also very limited. In addition, a more even distribution of files as regards the years in which they were subtitled could help in establishing a correlation between time and the dependent variables. In terms

of editing, transcriptions of characters' speech comparing it with the subtitles could quantify the edited text. Finally, ideally, interviews with more professional subtitlers should be carried out in order to observe clearer patterns within their practice.

7 FINAL CONCLUSIONS

The current research is the first and only historical account of subtitling for the deaf and the hard-of-hearing in Poland, offering a diachronic study of SDH norms in subtitle speed, editing and extra- and paralinguistic elements. The exploration of Polish SDH from a historical perspective is intended to provide everyone involved in the production, consumption and research of SDH with a detailed analysis of the forces behind its evolution in Poland. Set within the Descriptive Translation Studies methodology (see Chapter 2), the current research relies on the concepts of norms and patronage and examines how they have changed between the years 1994 and 2017, with a turning point in 2011.

The data demonstrate that current SDH in Poland is characterised by a set of norms that differ considerably from those in place during its early years. Even though the types of norm identified by such scholars as Chesterman, Toury and Pedersen can be applied to the characteristics analysed in both periods – subtitle speed, editing and extra- and paralinguistic elements –, they have been shown to evolve. This is evidenced by the following:

- Chesterman's expectancy norms have changed in that viewers, who originally had very little or no opinions on subtitles, have begun to voice their expectations, demanding verbatim subtitling and more detailed descriptions of sound effects and music for instance, although what is of primary concern to them is the provision of more subtitles on a variety of different platforms.
- Chesterman's professional norms:
    - Accountability – Although subtitlers have always felt responsible for their work, nowadays they have less direct contact with their audiences, more formalised guidelines and different clients, so that they are more inclined to follow the requirements of their commissioners rather than listening to the opinions of their audiences. Indeed, the information available to them in reception studies and recommended guidelines does not necessarily mean

that they are familiar with the needs and expectations of their viewers. In addition, they might not always wish or have time to educate their clients about such matters.

  - The relation norm – Thanks to more training in SDH in Poland, an increasing amount of research, reception studies, more formalised guidelines and technological advances, subtitlers are better able to transfer the original meaning of the source material into subtitles for deaf and hard-of-hearing viewers.
  - The communication norm – Like the improvements in education related to SDH, research and technology, subtitlers are now more equipped to ensure effective communication between the creator of the film or audiovisual programme and the target viewer.

- Toury's initial norm – With the viewers' demands for more verbatim subtitles in mind, we can say that there has been a move from more 'acceptable' (target oriented approach) to more 'adequate' (source oriented approach) SDH. However, as regards, the transfer of extra- and paralinguistic elements, the present subtitles are more 'acceptable' thanks to a more detailed description of sound effects, music, manner of speech, etc.
- Toury's operational norms:
  - Matricial norm – With the increase in subtitle speeds and more verbatim subtitles, 'fullness of translation' can be said to be more typical of SDH nowadays.
  - Textual-linguistic norm – The 2011+ period is characterised by a more thoughtful choice of linguistic elements in terms of dialogues and labels describing sound or paralinguistic features.
- Pedersen's expected reading speed norm – This has been shown to have increased over the two periods under study.

In addition to the evolution of norms, by exploring the contribution of powers such as the UN, governments and regulators, broadcasters and viewers the current research has demonstrated the part played by patronage in the development of SDH in Poland.

As we saw in Chapter 4, the UN is considered to be the driving force behind the part played by governments in terms of accessibility to audiovisual media, thus acting as a leading ideological power. However, it has been down to the governments themselves to make legal provision for accessible services. Examples from countries such as the USA, the UK and Poland highlight the fact that a satisfactory number of accessible audiovisual programmes can be delivered, almost exclusively, when broadcasters are legally obliged to provide them. Public service television stations, like those in the UK and Poland, had started to provide SDH before it became compulsory by law. When legal provision for such services began to be initiated, they even exceeded the initial required percentages for accessible programming stipulated by the regulators. However, private channels have been visibly slower to take up the challenge, and pressure has been growing to make sure that deaf and hard-of-hearing viewers have the access they deserve to audiovisual media across all channels and television stations. It should also be noted that broadcasters, who constitute another power within the concept of patronage, and one related to its economic side, are often limited by technology, for instance. This is why well-thought out increases in the provision of SDH, which are wisely spread over time and take into account the broadcasters' financial and technical possibilities, are the best means of ensuring that equal access to television can be enjoyed by everyone in society. Such plans for a steady, informed development of accessible services fall under the remit of the National Broadcasting Council. The Council acts as yet another ideological power, as it influences the changes that are happening in relation to SDH in Poland. It does so by controlling the implementation of Article 18a, by setting and monitoring the goals in terms of the quantity of SDH on various television stations, as well as holding broadcasters accountable. As detailed in Chapter 4, a similar role is played by regulatory bodies in other countries. In the USA, this falls under the remit of the Federal Communications Commission (FCC), while in the UK it is the responsibility of the Office of Communications (Ofcom).

It was also shown in Chapter 3 that, alongside NGO organisations, viewers have had a big influence on the improvement of SDH in Poland. They have made the most of social media by forming online groups on sites like Facebook

(for example Napisy Plus [Subtitles Plus), where they discuss the current state of affairs and suggest ways to improve it. In March 2017, it was the viewers themselves who were able to start the process of incorporating live subtitling through speech recognition on television (see Section 3.3.4.1), and persuaded DVD producers to add SDH tracks (see Section 3.3.4.2). Foundations like Widzialni or Kultura bez barrier [Culture without barriers] help in organisational matters and foster communication between audiences and official bodies such as the Parliament or the National Broadcasting Council. It is also a positive development that, now, the Council updates and releases the recommendations on the creation of SDH in Poland after having conducted open public consultations, allowing viewers, providers and researchers the opportunity to voice their opinions. In this way, viewers' needs and expectations are made known to the decision makers. The viewers are also able to understand the position of broadcasters better. In addition, it is a good platform for subtitlers to refer to their viewers' needs, as according to their feedback detailed in this thesis, nowadays they hardly ever communicate with their audiences directly.

All these developments would seem to indicate that SDH in Poland is heading in the right direction, and that all the parties concerned are becoming involved and working together. Viewed from this perspective, we can also argue that the position of SDH in Poland is relatively strong. Its commercial presence in many audiovisual productions and media channels (television, the internet, DVD and theatre) further testifies to this. The increase of SDH on different platforms means that deaf and hard-of-hearing citizens have more and better access to information and entertainment, that accessibility is more recognised now, more visible and therefore embraced by more people in the sense that they understand the need for equal access to audiovisual media by all.

The current healthy state of SDH is also confirmed by the large number of empirical research projects and experiments that are being conducted on aspects like the preferences of SDH viewers (Szarkowska and Laskowska 2014, Szarkowska *et al.* 2015), their reading comprehension of the subtitles (Krejtz *et al.* 2016, Szarkowska *et al.* 2011) and the challenges posed by multilingualism and the inclusion of several languages in the same film

(Szarkowska *et al.* 2013), to mention only a few. Researchers are also taking part in international projects, such as the DTV4All (Szarkowska *et al.* 2015 in Pablo-Romero-Fresco 2015), which offers them the opportunity to compare practices with those currently underway in other countries.

The current study represents a further contribution to research on the advancement of Polish SDH by offering a new methodology for the study of SDH, mainly by combining an analysis of files with subtitlers' feedback on their work. The professionals' responses provided an insight into their decision making processes and, by comparing them with the actual norms observed when analysing SDH files, further action aimed to improve SDH can be taken. In terms of subtitle speed, the study shows that, even though the display rates are increasing nowadays, they are still below the benchmark of 12 cps, which might be due to the resistance on the part of the subtitlers to apply higher subtitle presentation rates. On the other hand, as far as editing is concerned, the statements given by the professionals interviewed are reflected in the results of the examination of the subtitles in the corpus under analysis, namely that, whenever possible, close-to verbatim subtitling is practised. When editing needs to take place, it is usually done with the use of deletion rather than reformulation and in a way that it is least noticeable to the viewers. This contrasts with pre-2011 practices, especially in the very early stages when subtitlers more often than not resorted to adapting the text. As regards the extra- and paralingustic information, the results of the study of subtitles also follow the subtitlers' feedback in that they now render only the sounds that are relevant to the understanding of the plot, and the descriptions are more informative than in the pre-2011 period, where very general labels were common.

As far as suggestions for further research are concerned, it might be an idea to present the subtitlers with the results of the subtitle analysis and then ask for their views on them in order to find out whether there would be anything that they might consider changing in their professional work, or not, and why. In addition, more research could be done in comparing subtitles across different television stations to provide sound evidence for the introduction of a more

consistent approach in the use of descriptive labels, colours, etc. Other potential topics for future studies could include an analysis of SDH for different audiences. An example might be establishing and examining norms that are in operation in subtitles for younger audiences. In terms of new methodologies, it might be beneficial to make use of research tools such as eye tracking or even EEG (electroencephalogram) in order to track people's responses, whereas interviews can help researchers better understand the reasons behind the participants' actions.

It is my hope that the current research will inspire other researchers to continue studying SDH in Poland, and will possibly also encourage similar studies in other countries so that comparisons between our journeys can be made. As with the beginnings of SDH when the same approaches to editing were practised in many countries, these might help to predict further developments in SDH. After all, this research is based within the Descriptive Translation Studies, which aim to describe, explain and predict. I believe that my study describing the situation regarding SDH in Poland explains the developments that have taken place as regards the use of subtitle speed, editing and extra- and paralinguistic elements, thus providing a platform from which to predict further developments in the quantity and quality of SDH in the country.

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9 APPENDICES

9.1 APPENDIX 1 – Interviewees' answers

Appendix 1 can be found in the file below:

Appendix1_interviews_answers_all_PL.xlsx

9.1.1 APPENDIX 1.a – Interview questions in English

Appendix 1.a can be found in the file below:

Appendix1a_interview_questions_EN.xlsx

9.2 APPENDIX 2 – Films from the corpus

Appendix 2 can be found in the file below:

Appendix2_films_from_the_corpus.xlsx

9.3 APPENDIX 3 – Average subitle speed data in all films

Appendix 3 can be found in the file below:

Appendix3_Average_subtitle_speed_data_all_films.xlsx

9.4 APPENDIX 4 – Editing strategies in the corpus

Appendix 4 can be found in the file below:

Appendix4_Editing_strategies_in_the_corpus.xlsx

9.5 APPENDIX 5 – Extra- and paralinguistic elements in the corpus

Appendix 5 can be found in the file below:

Appendix5_Extra_and_paralinguistic_elements_in_the_corpus.xlsx

9.6 APPENDIX 6 – Subtitles with more than two lines

Appendix 6 can be found in the file below:

Appendix6_Subtitles_with_more_than_two_lines.xlsx